The best-selling RISC OS magazine in the world

ACORN USER

Wakefield News
- Find out inside all that you can expect to see and a few things you didn't

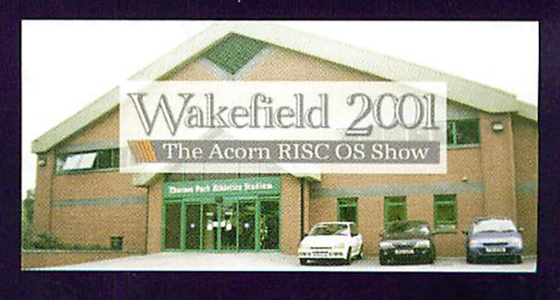
Education Extra
- Specialist Web sites examined for value
- The development of the Navaho Server

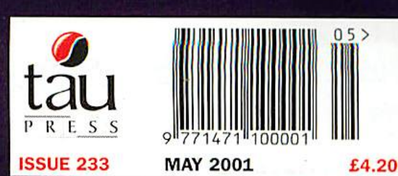


RiscStation's CD Scorcher running in the real world

Plus
- Ovation Pro reviewed
- Going Solo in Africa
- Using the pen that reads
- ProCAD hints & tips
- Faster MP3 encoding
- Cover art covered

...and all the regulars





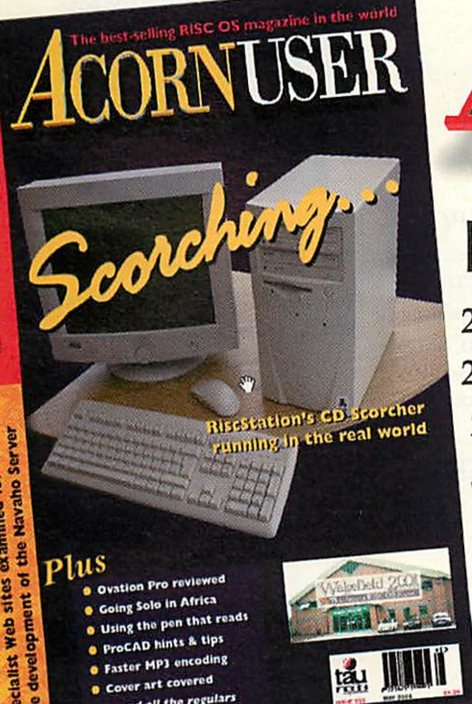
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ACORN USER



Features

Regulars

June issue on sale 17th May 2001



The Wakefield Show is looming large now and the excitement is beginning to grow – this time it really feels like it is going to be special.

We have companies that have been promising both hardware and software definitely having product that can sell us: Vantage at last will be with us promising an incredible new level of drawing ability. And we all have our hopes up for the final appearance of the Omega.

But surprise surprise we have at least two other machines on show. It has to be said that the ExpLAN Solo is hardly likely to reach market in the UK – we just don't have enough sun for it but it's mere existence is a great thing. And there are more.

The Third World is a neglected area when it comes to computers and promotion. For the PC manufacturers it's not something they would ever really see themselves getting into, they would need to have a robust machine and something with a minimum of moving parts.

RISC OS and RISC OS machines are built on simplicity and that is the key to their power. Just look at the OCR Pen Reader in this issue, because of the ease and simplicity of the system the new hardware could be incorporated easily and quickly.

We have the power, let's use it.

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RiscStation 1999 2000
RISC OS compatible products for the new Millennium

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LOW cost finance or **leasing on all systems (from £5.30/week)**
inc. peripherals, software & 2/3 yr optional warranties (min. deposit 10%)

RiscStation



SCORCHER

The R7500 Scorcher from RiscStation arrives with a quality CD ROM Reader/ ReWriter and media, providing a brilliant CD mastering platform for home & business.

from **£769** + Vat (£903.58) £29.52/month

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New Price to Be announced
Updated specification to be announced

Acorn



Acorn Kinetic RPC

Latest Acorn StrongArm series machine
70MB, 10GB HD, 40xCD
from **£999** +VAT (£1174) £34.51/month

Internet RPC 138MB, 30GB HD, 40xCD
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(includes internet pack)

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Available soon the new RISCOS desktop

From **£999.00** +VAT (£1173.83 inc.)
287Mhz StrongArm, ATX Tower case
Full spec. on release
Free software pack

Above prices do not include monitors please see separate price list

RiscStation Lite R7500

From **£499** + Vat (£586.33)

Over £500 worth of FREE SOFTWARE

R7500 with 16MB memory & 4G Hard Drive			
R7500 base only	£499 + Vat	(£586.33)	(£19.16)
15" monitor system	£599 + Vat	(£703.83)	(£22.99)
17" monitor system	£639 + Vat	(£762.58)	(£24.53)
19" monitor system	£699 + Vat	(£880.08)	(£26.83)

The enhanced R7500 Plus with 50ns 64MB/ 10.2G			
Plus Base only	£579 + Vat	(£680.33)	(£22.23)
Plus 15" system	£679 + Vat	(£797.83)	(£26.06)
Plus 17" system	£719 + Vat	(£844.83)	(£27.98)
Plus 19" system	£779 + Vat	(£915.33)	(£29.90)

Add just £20 (+ vat) to R7500 Plus / Scorcher Tower to include a **Zip100 Drive**

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From only £143.83 + VAT
(£169.00 inc. VAT)

Basic Model	£143.83	£169.00
With Plus Pack	£169.36	£199.00
ClassRoom Pack (5)	£725.00	£851.88

8 MB Machine with 1/2 VGA Screen Built in WP, SS, Diary, Sketch, Jotter, Spellcheck and Internet WWW and E-mail s/w. Psion © Compatable.

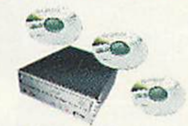
Acorn A7000 series



Classic RO3.7 / no CD	£449.00	(£527.58)	(£17.24)
Classic RO3.7 24x CD	£499.00	(£586.33)	(£19.16)
Odyssey Net RO3.7	£499.00	(£468.82)	(£19.16)
Odyssey Net RO4.0	£449.00	(£527.58)	(£17.24)
Odyssey CD	£549.00	(£645.08)	(£21.07)
Odyssey Primary	£599.00	(£703.83)	(£22.99)
Odyssey Secondary	£599.00	(£703.83)	(£22.99)
Odyssey Surf	£599.00	(£703.83)	(£22.99)

Above prices do not include monitors please see list

CD-ROM WRITERS



***"ScorchIT"* CD Writer Pack**

Upgrade your Acorn or RiscStation 7500 with a home CD authoring package as found in the RiscStation SCORCHER machine. This package contains the latest version of CD Burn, Writable and ReWritable media to get you started and one powerfull

8x8x32x CD ROM Writer/Rewriter.

only £189 + Vat (£222.08)

Now SCSI Version with 12x10x32x Re-Writer

only £285 + Vat (£334.88)

IDE 8x8x32x CDR/W	£139.00	£163.33
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SCSI 12x10x32x CDR/W	£237.45	£279.00
CD-BURN	**£49.00**	£57.58
CD-SCRIBE 2	**£39.00**	£45.83

External versions Available

NeTWORX NeTWORX HD

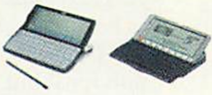


from **£399** + Vat (£468.83) £15.32/month

HD fr'm £449 +Vat (£527.57) £17.24/mth

50 mip Arm7500 system with 16Mb memory, (HD version & Hard Drive) , built in ZIP drive support, Midi support, 3D sound, & sampler , 10baseT port as standard, RISCOS 4 as standard, High speed serial , High speed parallel, expandable to **256Mb** memory & hard drive / CD-ROM etc.

Psion PalmTops



Series 5 Revo	Series 5 MX	Series 7
£199 + VAT	£319 + VAT	£595 + VAT
(£233.83)	(£374.83)	(£699.13)
* 8MB memory	*16MB memory	*16MB memory
WP, SS, Diary, Sketch, Jotter, Spellcheck	WP, SS, Diary, Sketch, Jotter, Spellcheck	WP, SS, Diary, Sketch, Jotter, Spellcheck

Complete Acorn A3020 (or A3000 if required) Acorn HD systems inc monitor **£99.00 + VAT** (£116.33)
A4000 and A5000 Systems also available

Refurbished Acorn 710



Bases from £199 + VAT
Systems with New 15" Monitor from £290 + VAT.

Kinetic (64MB) upgrades

New SA upgrade using SDRAM

Processor card (inc RO4)	**£399.00**	**(£468.82)**
Trade-Up 1 (from SA & RO4)	£299.00	(£351.32)
Trade-Up 2 (from RO4 only)	£349.00	(£410.07)
Trade-Up 2 (from SA & RO3.7)	£349.00	(£410.07)

128MB version extra £69.00 (£81.08)

StrongARM Rev "T" with RISC OS 4 **only £299** inc VAT

CD-ROM media

	ex VAT	inc VAT
CDR CD-ROM	**£0.84**	**£0.99**
CDR 10 pack	**£5.95**	**£6.99**
CDR 25 pack	**£12.76**	**£14.99**
CDR 80min 10 pck	£7.65	£8.99
CDR 80min 25 pck	£17.01	£19.99
CDR/W CD-ROM	£1.28	£1.50
CDR/W 10 pack	£11.00	£12.93
5.2Gb DVD RAM	£25.00	£29.37

IDE Zip / LS120 require s/w drivers or RiscStation style hardware support. **Parallel Drives inc. RISCOS Software**

LS120 IDE int	#	£55.00	£64.62
Zip 100 IDE int	**#**	**£55.00**	**£64.62**
Zip 250 IDE int	**#**	**£85.00**	**£99.87**
Zip 250 parallel ext.	#	£129.00	£151.58
Zip 250 SCSI ext.	#	£105.00	£123.37
JAZ 2GB SCSI ext.		£235.00	£276.12
JAZ 2GB Parallel ext.		£299.00	£351.32
Orb 2.2 GB IDE		£165.00	£193.87
Orb 2.2 GB Parrallel		£199.00	£233.83
LS120 Media		£4.00	£4.70
Zip 100 Media		**£7.65**	**£8.99**
Zip 100 Media 5 pack		**£34.03**	**£39.99**
Zip 250 Media		**£10.63**	**£12.49**
Zip 250 Media 5 pack		**£50.00**	**£58.75**

Removable Drives

4GB IDE Pullman	**£79.00**	£92.83
4GB Parrallel Pullman	£139.00	£163.33
4GB P'llel Datasafe	£119.00	£139.83
10GB IDE Pullman	**£95.00**	£111.62
10GB P,llel Pullman	£155.00	£182.12
10GB P'llel Datasafe	£135.00	£158.62
20GB IDE Pullman	**£105.00**	£123.37
20GB P'llel Pullman	£165.00	£193.87
20GB P'llel Datasafe	£145.00	£170.37
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750Mb Nomai	**£38.00**	£44.65
	£58.00	£68.15
2 GB Jaz Media	**£68.00**	£79.90
2.2 GB ORB Media	**£32.00**	£37.60

MP3 CD Player

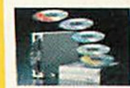


Plays back ordinary audio CDs, CD-R and MP3CDs (which can hold 160-200 MP3 tracks each).

Ideal with CD-ROM Writers

only £69.00 exc. VAT
(£81.08 inc.)

CD-ROMS



SCSI 8x
4way **Autochanger**
£75.00 + vat (£88.13)

52x IDE	£39.00	£45.83	40x SCSI	£65.00	£76.37
48x IDE	£34.00	£39.95	32x SCSI	£59.00	£69.33

External CD ROMs

40x IDE (with cable)	**£85** + VAT
40x SCSI I(with cable)	**£115** + VAT
40x SCSI II(with cable)	**£120** + VAT
6x 40x CD Tower (+HD space)	£449 + VAT

Internet Packs from **£85 + VAT (£99.88)** available for all machines include Internet software, ISP setup and 56K modem

3 yr Warranty on ALL Acorn MEMORY & Upgrades

Upgrade	A310	A440	A4X0/1	A540	A3000	A3010	A3020	A4000	A5000
1-2MB	-------	-------	£25	-------	£15	£15	---------		---------
2-4MB	-------	-------	£50	-------	---------	---------	£40	£40	£45
1-4MB	£35 *	-------	£75	-------	£35	£45	---------	---------	---------
4-8MB	£55	£55	£55	£45	£55	---------	---------	---------	£55 *#
RISCOS Carrier	£19 *	£19 *	---------	-------	---------	---------	---------	---------	---------
RISCOS 3.1	£25	£25	£25	£25	£25	---------	---------	---------	£25
MEMC1a	£20	£20	---------	-------	---------	---------	---------	---------	---------
Arm3(33)	£45	£45	£45	-------	£45 *	---------	---------	---------	---------
Arm3(25) & FPA10	£85	£85	£85	-------	£85 *	---------	---------	---------	---------
FPA10	£45	£45	£45	?		---------	---------	---------	£45
VIDC/IOC	£20	£20	£20	£20	£20	---------	---------	---------	£20

N.B. All above prices exclude VAT at 17.5%

* Re-work if required £25 (£29.38) # not applicable to 33MHz A5000

RISCOS MEMORY

LOWER PRICES!

EDO memory Suitable for RPC, RiscStation & Mico

Also A7000	Ex VAT	Inc VAT
8Mb SIMM EDO/FPM	£8.51	£10.00
16Mb SIMM EDO/FPM	£25.00	£29.37
32Mb SIMM EDO/FPM	£49.00	£57.58
64Mb SIMM EDO/FPM	**£59.00**	**£69.33**
64Mb SIMM RS 50ns	**£99.00**	**£116.32**
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2Mb VRAM	£75.00	£88.12
1-2Mb (exchange)	£65.00	£76.37

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8MB	£21.00	£24.68	64MB	£63.00	£74.03
16MB	£29.00	£34.08	96MB	£125.00	£146.87
32MB	£37.00	£43.48	128MB	£115.00	£135.12

Smart Media Flash for Cameras

32MB	£33.00	£38.77
64MB	£59.00	£69.33

NETWORKING

ETHERNET INTERFACES

	Ex. VAT	Inc VAT
A3000 int. 10base2 or T, Access+	£89.00	£104.58
A400/A5000 10base2 or T Access+	£89.00	£104.58
A400/A5000 10base2 & T Access+	£99.00	£116.33
A3020 10base2 Access+/ext. MAU	£94.00	£110.45
A3020 10baseT Access+/etx. MAU	£94.00	£110.45
Risc PC/A7000 10base2 & T Acc+	£99.00	£116.33
Risc PC/A7000 10baseT Access+	£94.00	£92.83
Ant Access + ROM upgrade	£10.00	£11.75

Network Hubs *(more available)*

	Ex VAT	Inc VAT
8 Port 10bT +1 10b2	£35.00	£41.12
8 Port 100 *special*	£89.00	£104.57
8 Port 100/10 Auto	£99.00	£116.32
18 Port 10 16T+ 2BNC	£75.00	£88.12
16 Port 100/10 Auto	£229.00	£269.07
16 Port 100/10 Auto (inc 3 port switch)	£269.00	£316.07
24 Port 100/10 Auto	£299.00	£351.32
24 Port 100 *special*	£249.00	£292.57

Cables

2M	£2.00	£2.35
3M	£3.00	£3.53
5M	£5.00	£5.87
10M	£9.00	£10.58
20M	£15.00	£17.62

State 10base2 or Cat5 UTP
any size made to order

We supply and / or install all network components please ring for your requirements

NETWORKING SOFTWARE

Topcat site licence	£489.00	(£587.50)
NTfiler site licence	£97.00	(£113.98)
Omniclient site licence	£489.00	(£587.50)
Lanman98 single user	£35.00	(£41.13)
Win95FS single user	£35.00	(£41.13)
Lanman or Win95FS 10 user site licence	£110.00	£129.25
Lanman or Win95FS 20 user site licence	£156.00	£183.30

Cable-Free



Mouse for RiscStation & A7000 /Mica £19.95 inc.
Mouse for Risc PC / A5000 /A400 etc. £39.95 inc
Keyboard for RiscStation, RPC /A7000 £29.95 inc.



Trackball for R7500 / A7000 £19.95 inc
Trackball for RPC £42.95 inc

	Ex. VAT	Inc. VAT
A7000 / Riscstation Mouse NEW	£10.00	£11.75
Riscstation infra-red Mouse NEW	£21.27	£24.99
Riscstation Ergo Trackball NEW	£16.98	£19.95
Infra-red Keyboard (PS/2 & AT)	£25.49	£29.95
Lower CASE Keyboard (PS2)	**£29.78**	£34.99
A400/A5000 replacement K/brd	£59.00	£69.33
A400/A5000 Ergo Keyboard	£69.00	£81.08
A4 replacement keyboard	£49.00	£57.58
A4000 Keyguard (special needs)	£25.00	£29.37
A3000 /A300,400,500 Keyguard	£25.00	£29.37

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Midi Break-out cable with driver sw £15 + VAT
Yamaha DB51 XG Wavetable Card, Midi cable & drivers £99 + VAT
Yamaha DB51 XG Wavetable Card, Midi cable, drivers & Evolution MK149 keyboard £199 + VAT

Podule "MidiMax Card	£79.00	£92.83
MiniPodule Midi card (A3x00)	£69.00	£81.08
Refurbished Midi card A3x00	£20.00	£23.50

Desktop FAX MODEMS

56k x2/V90 3Com USR	£99.00	£116.32
56k Flex/V90 (Rockwell)	**£49.00**	**£57.58**
56k V90 Internal for RS	**£49.00**	**£57.58**
ISDN modem (external)	£79.00	£92.83
!Dialler	£17.02	£20.00
Oregano	£49.00	£57.58
Webster XL	£21.28	£25.00
Messenger Pro	£25.53	£30.00
ArcFax Fax software	£26.38	£31.00





Bare Phoebe cases (no electronics sorry) Only £25.00 (£29.38 inc)

3.5" IDE Hard Drives

	Ex VAT	Inc VAT
210Mb	*£25.00*	*£29.37*
500MB	*£45.00*	*£52.87*
4.3GB #	£59.00	£69.33
10.2GB *	£72.00	£84.60
20.1GB *	**£79.00**	**£92.83**
30.5GB *	£89.00	£104.57
40.0GB *	**£99.00**	**£116.32**
60.0GB *	£155.00	£182.12
80.0GB *	£199.00	£233.83

requires RISCOS 3.6 /3.7 * requires RISCOS 4 or Partitioning s/w for only £25.00 + vat

SCSI HARD DRIVES

2.0 Gb	£69.00	£81.08
4.3Gb (5400 or 7200)	£99.00	£116.32
9.1Gb (7200 rpm)	£145.00	£170.37
18.6Gb (7200 rpm)	£212.00	£249.10
36.4Gb (7200 rpm)	£389.00	£457.08
73.4Gb (7200 rpm)	£738.00	£867.15

A3020 / A30X0 & I/F

	A3020 Ex VAT	A3020 Inc VAT	A30X0 & I/F Ex VAT	A30X0 & I/F Inc VAT
170MB	£39.00	£45.83	£89.00	£104.57
340MB	£49.00	£57.58	£99.00	£116.32
500MB	£59.00	£69.33	£109.00	£128.08
810MB #	£79.00	£92.83	£109.00	£128.08
1.0Gb #	£99.00	£116.32	£129.00	£151.58
2.1GB #	£109.00	£128.08	£139.00	£163.33
4.3GB #	£129.00	£151.58	£159.00	£186.83

A30X0 version includes CD ROM i/f which can be used in A3020 or A4000. For external A3000 i/f add £20.00 +VAT # includes partitioning software

COLOUR SCANNERS

All scanners inc RISCOS Software



P'llel Mustek 600dpi	£99.00	£116.32
Mustek A4 1200dpi	£149.00	£175.08
Epson Perfection	£212.00	£249.10
Epson Perf'n Photo	£275.00	£323.12
Epson Photo unit	£85.00	£99.87
Ep'n GT9500 p'll /SCSI	£149.00	£175.08

ImageM & Twain also available separately

Hardware Bargains		exc VAT	inc VAT
A3000 2Mb bases from	#	£35.00	£41.12
A3020 2Mb HD bases from	#	£79.00	£92.83
A4000 2Mb bases from	#	£127.00	£149.22
A5000 4Mb bases from	#	£199.00	£233.83
SCSI 4x6x autostacker (new)		£115.00	£135.13
A5000 /A400 Ext CD-ROM	#	£42.00	£49.35
A310 /400 Floppy drives	#	£12.00	£14.10
A3000 / A400/1 Floppy drive	#	£12.00	£14.10
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A3000 PSU's	#	£20.00	£23.50
A30X0 analogue / user card	#	£15.00	£17.62
A30X0 IDE / user port cards		£40.00	£47.00
A30X0 Castle IDE cards		**£35.00**	**£41.12**
A3000 Dual Podule expan.	#	£30.00	£35.25
A4000 Motherboards (new)		£70.00	£82.25
Scanlight 256 hand scanner	#	£42.00	£49.35
VIDC Enhancer		£17.00	£19.98
RiscPC 486sx33 PC cards	#	£25.00	£29.37

MONITORS

	Ex VAT	Inc VAT
AKF52 Multisync 14" 1yrRTB	**£127.00**	**£149.22**
15" LCD (3yr on-site)	£599.00	£703.83
17" LCD (3yr on-site)	**£999.00**	**£1173.82**
18" LCD (3yr on-site)	£1249.00	£1467.57
15" SVGA 0.28 (3yr on-site)	£95.00	£111.62
15" SVGA 0.28 Multi-Media	£119.00	£139.83
17" SVGA 0.28 (3yr on-site)	£129.00	£151.58
19" SVGA 0.26 (3yr on-site)	£199.00	£233.83
21" SVGA 0.25 (3yr on-site)	£499.00	£586.33
15" Iiyama Vision Master 350	**£109.00**	£128.08
17" Iiyama Vision FST	**£139.00**	£163.33
17" Iiyama Diamondtron	**£199.00**	£233.83
19" Iiyama Pro 450	**£320.00**	£376.00
21" Iiyama Vison Master	**£535.00**	£628.62
22" Iiyama Pro Diamondtron	**£558.00**	£655.65
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AKF12 PAL 14" refurb 90 days	*£45.00*	£52.87
AKF52/53 M/sync refurb 90 days	*£85.00*	£99.87
AKF60 SVGA 14" refurb 90days	*£59.00*	£69.33
Multisync A300/A3000 cable	£8.50	£9.99

All monitors inc 3 yrs wty unless specified

BEST PRINTER PRICES

		Ex VAT	Inc VAT
Postscript colour Inkjet from	*A4*	*£199.00*	*£233.83*
Postscript colour Laser from	*A4*	*£1025.00*	*£1204.37*
Postscript B/W Laser	***A4***	***£212.00***	***£249.10***
Canon BJC S400 colour €	A4	£79.00	£92.83
Canon BJC S450 colour €	A4	£102.00	£119.85
Canon BJC S4500 colour €	A3	£255.00	£299.62
Canon BJC S800 Photo #	A4	£285.00	£334.87
Canon BJC 8200 colour #	A4	£249.00	£292.57
Epson Stylus 1520 colour	A3	£340.00	£399.50
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Earth Summit for RISC OS

As a precursor to the United Nations' Earth Summit which is due to take place in South Africa next year, a conference addressing Agenda 21 was held at the London School of Economics on Tuesday 20th March 2001.

Agenda 21 is a comprehensive plan of action to be taken globally, nationally and locally by organizations of the United Nations System, Governments, and Major Groups in every area in which human impacts on the environment. The main thrust is that everyone needs to play their part in preserving our planet for future generations.



Project Planet Eye is an organisation collating information on various levels including global efforts, stance, and commitments from various nations right down through regional information to local views and efforts to improve the environment. Their aim is to provide this wealth of information via the Internet for anyone and everyone to access and see what is being done.

This means that, on the same Web site, the thoughts and opinions of world leaders such as The Prime Minister, Mr. Blair, and the local cobbler who recycles insoles (!) can be published for all to see since both have equal right to comment on the future of the planet we all share. This central resource of environmental efforts information will be supported by the sponsorship of companies, individuals, and non-governmental organisations who all subscribe in practice to the aims and objectives of Agenda 21.

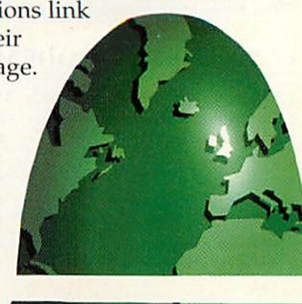
Project Planet Eye have asked Arcania, a company based in Wales, to compile the Web site since that is a service they offer and since they embody the ideals represented by Agenda 21.

Arcania is a small company who live a very 'green' existence using solar and wind-power generated resources to fuel their office and a music recording studio which is 'in the middle of a field'.

Their chosen computer platform for their work is RISC OS. Arcania decided to approach RiscStation Ltd. to supply computer systems for use at the Agenda 21 conference since their energy efficiency was in-keeping with the spirit of the event.

The event itself went smoothly and successfully. A lot of interest was shown in the Web-based information and also in the computers being used to display the information. Also taking pride of place was Paul Richardson from Explan demonstrating a real-life application of 'green' technology put into practice and the exciting developments he's currently working on.

If you want to see how Arcania designed and produced a calendar without plugging their computer into the mains then look at **www.arcania.co.uk/solunium/** and teachers in particular might wish to read the IT Solutions link from their home page.









How ya qiddling?

Were we qiddling you last month? Well possibly; but only a bit. Anne Browne (otherwise Kathy A Cartmell-Browne) is indeed the spokesperson for FD Games and all those of you who looked at the article and thought to yourself "An obvious April Fool trap!" missed out on the chance of a free game. Qiddle does exist, as described last month. It's a board game and all you needed to do was Run the Risc of making a fool of yourself by phoning someone on a Sunday morning. Yes we did try to help you with the title of the article.

Of course we were a touch naughty in talking about being able to play the game whatever computer you had (true but irrelevant) but we didn't actually say it was a computer game. I'm not sure whether I'm being April Fooled myself but one entrant took the concept as a challenge and insisted that it is possible to write code that will run on more than one system. More about that at another time.

Qiddle

As it happens the name that emerged out of the Scrabble bag as winner of a game of Qiddle was Martin Allcorn who describes himself as the only person daft enough to emulate the Memotech MTX on both Acorn and PC systems. Should anyone else who entered the competition find themselves at the Wakefield RISC OS Show on 19th/20th May then they can claim a 50% discount on a Qiddle game from the FD Games stall — and we promise not to let anyone know if you were completely fooled.

Not April Fool

We've all been eagerly waiting for Wakefield and the goodies that are to be demonstrated and/or released. A new machine from RiscStation, a new operating system from RISCOS Ltd and Vantage from Cerilica and Omega (at last) have all been mooted; but what about the surprises that will be served up this year?

We've heard some interesting rumours from one of our hardware developers that will undoubtedly produce raised eyebrows and orders — but more about that next month. As well as one major software developer stating that he will have a product that people have been talking about recently...

Possibly the most welcome product is one that's likely to be a big hit away from the UK — and that's already been mentioned here and in more detail elsewhere in this issue.

April fool – a delicious taste

Of course the comp.sys.acorn newsgroups came alive just after midnight in the morning of 1st April with three excellent spoofs. Roger Wylde unveiled some radical new technology offering an alternative to copper-based networking.

There was a degree of scepticism in the responses to his Wet String Networking proposals and I'm afraid that the technology is already in use by Microsoft (or at least it seems so by the amount of data spillage that I get on the PCs at work).

A second announcement was of the very useful 29-bit firmware to ease the transition between 26-bit and 32-bit software. Somewhere along the thread these two announcements became entangled and floated off leaving various people pointing excitedly at some 'new' hardware from the Isle of Man and with Far Eastern connections.

Between (whoever they are) they managed to produce an excellent site and would have undoubtedly sold a goodly number of machines had the more gullible not had 'April Fool' shouted at them. A good specification and a good site can sell: RISC OS dealers and developers note!

This puts us in mind of some of the spoofs in the dim and distant past of Acorn press – like the pre-cognitive operating system from Mike Cook. And the checksum program for listings which could supposedly re-create programs from the checksums themselves.

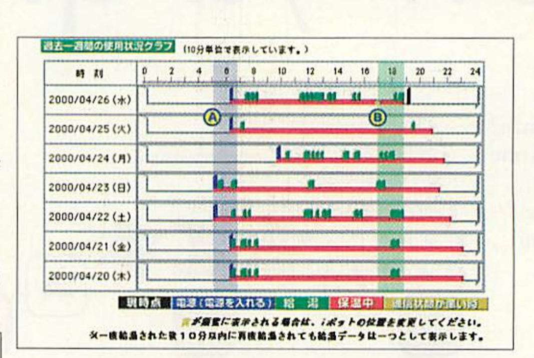
What will we think of next?



i-Pot, u-Pot, everyone pots

I just wish we'd noticed this in time for last month's edition of *Acorn User*. It may be an April Fool's joke but my Japanese isn't up to the nuance required to distinguish Fact from Fool. Apparently the i-Pot has recently been released by the Zojirushi Corporation of Japan.

The i-Pot's ostensible purpose is to boil water (it's a kettle) but it also incorporates a device that sends a signal to a Web site which collects and displays statistics about the i-Pot's use.





Why?

Obviously so that without disturbing Granny by actually ringing her up and chatting to her you can check that she's still well enough to keep making herself a cup of tea. If you can read Japanese and find that it is an April Fool's trick, please don't tell me. I want to keep my prejudices about the how silly we can be with technology. Let me know if you find it uses an ARM processor though!

www.mimamori.net

Thanks to Jakob Nielsen's on-line column for bring the i-Pot to our attention:

www.useit.com/alertbox/20010318.html

Totally graphical

In last month's Totally Graphical article we Totally Misunderstood the situation regarding the Draw Interactive Tutorial written by Tom Beeley. Although you can purchase the tutorial on CD from APDL (as we pointed out in the article) it is also still available direct from Tom on floppy discs.

Tom's version has the advantage of including 20 work sheets / information sheets ready printed out in colour and is obviously perfect for those without a CD drive. To make up for missing that snippet of information we're printing Tom's drawing of a Volvo from his tutorial. It was produced entirely in *Draw* and is also on last month's *Acorn User* CD together with a whole chapter from Tom's tutorial.

The tutorial on floppy discs, including pre-printed sheets. are available from: Tom Beeley, 1A Den Hill Drive, Springhead, Saddleworth OL4 4NR

Faster is now standard

Following our announcement of faster memory upgrades for the RiscStation computers, RiscStation have let us know that their R7500+ machines are now being shipped with the faster RAM as standard although the upgrade can still be purchased for use in all RiscStations.

The latest estimates of speed increase with the faster RAM is 27% but we have been unable to verify this for ourselves.



Whether this is an 'up to' or 'average' figure is something we'd like to hear about from independent users who have used the upgrade for a while.

In brief

Old data for new

APDL have announced that they have taken over Masterfile from BEEBUG Ltd. Masterfile started life in 1982 as a cassette-based Database from the then Beebugsoft Ltd (later RISC Developments Ltd). The author of the original, Sheridan Williams, is the Managing Director of BEEBUG, and wrote the program to fulfil a need he had for himself.

Masterfile III runs within the RISC OS desktop environment, and is essentially a simple entry-level database. It does have some powerful features, though. APDL will supply Masterfile III on CD-ROM, together with a 100 page manual including a comprehensive tutorial.

The relaunch price of Masterfile III is £14.90 inc VAT and postage within the UK. To order, please contact APDL on 020 8778 2659 or email info@apdl.co.uk

More ovations

Ovation Pro has just been upgraded to version 2.63 see the review in this issue. David Pilling, PO Box 22, Thornton Cleveleys, Blackpool FY5 1LR. E-mail: **david@pilling.demon.co.uk** Web: **www.pilling.demon.co.uk /ovationpro/index.html**

New deal for labels

Here's a funny thing, in the dealer pages you'll find an advert for Superfast Labels. There I was chatting to the owner and I said "Acorn User" and he said: "I know that magazine. Redwood isn't it?" "Not for a while — did you read it?" "No, I used to print it."

Back in the bad old days of the '80's he worked for the printing company Ives who produced Acorn User for Redwood. Now there's a thing.

Summer Style

Those of you who believe the *high*-point of the RISC OS year is in the Autumn should note that the two day RISC OS

Continued...

Get some churchin' up

The Christian Acorn User Group has announced a long-awaited upgrade to the Acorn Liturgy Suite. This resource for users of RISC OS machines comprises the following:

Common Worship: Eucharist	material from Standard Edition and some from the President's Edition
Common Worship: Initiation	as above
Common Worship: Services of the Word	from the Standard Edition
Common Worship: Pastoral Services	Wholeness, Marriage, Funeral
Common Worship: Calendar, Lectionary and Collects	Calendar application so you can generate Collects and Readings for any year.

The Suite comes on two HD floppy disks and costs £2.50 (it's a non-profit product). The modules interact with ExpLAN's HolyBible software and will not work without this.

The modules permit the export of the text, and allows the user to take advantage of the excellent search facilities available to *HolyBible*. Cheques payable to 'Christian Acorn User Group' via Rev'd Colin Randall, The Vicarage, Warwick Bridge, Carlisle CA4 8RF. Tel: 01228-560332

The *HolyBible* software is available from: ExpLAN Computers Ltd, PO Box 32, Tavistock, Devon PL19 8YU. E-mail: **info@explan.co.uk** Web: **www.explan.co.uk**

Revitalisation

The last month or so has seen a plethora of announcements from ProAction/APDL about software they have acquired from Beebug.

The software in question includes *Hard Disc Companion, Sleuth, MasterFile, Easy-C* and *TypeStudio* that are planned for expansion over the coming months. To what extent they are able to bring them up to date is yet to be seen but there appear to be big plans for *TypeStudio* for instance.

From Cerilica comes *Phantasm*, the excellent colour companion for *ArtWorks*, is being re-launched at £9.90 (+p&p) and there are plans for a similar tool that will work with *Draw* instead. *RiscCAD* was mentioned in last month's Graphics round up and their new stable also includes the original *Ovation 1* (not to be confused with the top-of-the-range-DTP program *Ovation Pro* which is still owned and actively developed by David Pilling).

Personal Accounts is already superb but they insist that they are listening to suggestions for improvement with this and all the other software. To my mind this is excellent if they really mean it — and the only way to test that is to send them your ideas.

APDL, 39 Knighton Park Road, Sydenham, London SE26 5RN. Tel: 020 8778 2659; E-mail: **info@apdl.co.uk**

32-bit — step 2

In the first edition of the year we reported that RISC OS Ltd and Pace Micro had released a beta version of components required to produce RISC OS programs that would be compatible with future 32-bit only versions of RISC OS. Last month we received the following from the two companies:

"RISCOS Ltd and Pace Micro Technology plc have today released an updated version of the components required for users of the Acorn C/C++ development environment to produce RISC OS programs that will be compatible with future 32-bit only versions of RISC OS.

"The beta software is freely available from the RISCOS Ltd Web site at **www.riscos.com/download/**"

As we said back in January the first steps have been taken to ensure that RISC OS software will be able to use the new processors and since then there have been signs of writers successfully testing their software with the new tools.

Together with the Omega and other hardware this is clearly makes for an interesting and critical moment in RISC OS history.

In brief

2001 show run by the ARM Club, in conjunction with ROUGOL and SASAUG, will take place on the weekend of 20th and 21st October. This year the venue will be the Blue Mountain Conference Centre at Binfield, Bracknell which may make it more accessible than Epsom for those of us living north of London.

Meanwhile the RISCOS Southeast show has also moved to a new venue. This year's show will be taking place at the Putteridge Recreation Centre, Luton on Saturday 21st July 2001.

RISC OS Expo 2001

Although most of us in the UK have our eyes firmly set on Wakefield as the high-point of the Spring (RISC OS wise) some dealers will be required to do a quick turn round to be ready for RISC OS Expo 2001. This year again the Big Ben Club is organising its yearly national show, this year called RISC OS Expo 2001. The Big Ben Club is the Dutch Acorn User Group.

The show is always an excellent opportunity for users from the Netherlands, Belgium and Germany to see RISC OS Hardware and Software. For the exhibitors the show an excellent opportunity to promote and sell their RISC OS Hardware and Software to the Dutch, Belgium and German RISC OS users. Expo 2001 this year is on Saturday, June 16th, 2001 at the Expo and Concorde Hall, Hotel Mercure, Buizerdlaan 10, Nieuwegein (near the city of Utrecht).

Details from:

aw.bezemer@wxs.nl
www.bigbenclub.nl/
www.bigbenclub.org/

Next month

Next month we hope to explore how you can make something small even smaller; with less but just as much and at the same price but less. And it's hardware running RISC OS.

Contacting AU

news@acornuser.com
John Cartmell



A thumping good app

Did I really deal with *Thump* in only nine (short) lines last month? There are far too many aspects to Graphics and even in a 'Totally Graphic' edition of *Acorn User* some superb applications were skated over far too hastily. That's where this page can make amends.

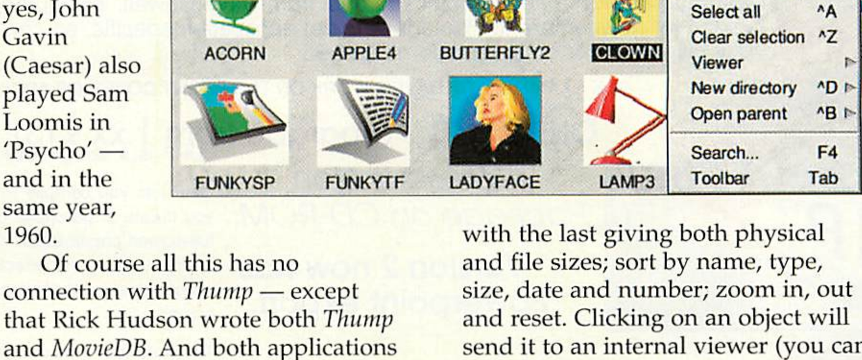
I've been using *Thump*, on and off, for some time and downloaded the latest version whenever I encountered the Rick Hudson Web site. Rick's interests ensures this serendipity usually coincides with a wish to update my knowledge of the silver screen.

Why?

Rick is author of a range of software, not least of which are *Thump* (the subject of this column) and *MovieDB*. The latter is a specialist database application designed to contain and access the massive IMDb files which enable you to relate that 'Play Misty for Me' is referenced in 'Dirty Harry' and featured in 'The Cable Guy'.

Rick's application is small enough but the full IMDb files really require you to have free internet access and a couple of spare weekends — all so that you can list all Marilyn Monroe's films starting with 'The Shocking Miss Pilgrim' (1947).

If you're a film buff, produce quizzes or simply can't settle to the film until you've checked that Caius Julius Caesar in 'Spartacus' was also in a Hitchcock film; then MovieDB and at least some of the IMDb files are for you. Yes, my wife too asks those awkward questions and yes, John Gavin (Caesar) also played Sam Loomis in 'Psycho' — and in the same year, 1960.



Of course all this has no connection with *Thump* — except that Rick Hudson wrote both *Thump* and *MovieDB*. And both applications are excellent. And free.

Thump, having finally got to this months subject matter, simply allows you to see graphics files. You can drop a directory onto the Thump icon and the directory will open showing the pictures themselves instead of the standard icons for *Draw* and *Paint*. You can even move through the directory structure and any graphics encountered will be displayed and other files ignored.

Well not quite. When I really looked at the application last month, in preparation for the graphics round-up, I found that I'd been misusing the application for some time — or at least if not misusing, certainly underusing.

This simple little application deserves all the exploration that I advocated in this column last month; it supports the *Help* application and the menus amply repay studying. Apart from the pictures that are generated the *Thump* window looks, and acts, just like a standard filer window; but that's before you check the menu.

You can display large, small or full info windows — with the last giving both physical and file sizes; sort by name, type, size, date and number; zoom in, out and reset. Clicking on an object will send it to an internal viewer (you can scale it from the viewer or set the scale in choices); an Adjust-click will allow you to add a caption (captions are displayed in one of the two display modes I didn't mention) and keywords on which you can subsequently search.

If you'd rather work with a toolbar or the keyboard — the options are there and each image can be simply dragged elsewhere, viewed in the internal viewer or its home application, and made into a backdrop (where applicable). The directory of images can be sent to a slideshow, saved as a page of *Draw* or *Paint* thumbnails (with titles), or exported as a text list. I would say more (perhaps I could squeeze in a mention of the very full set of choices, the *StrongHelp* manual, and its support for JPEG images as well as *Draw*, *ArtWorks*, *Paint* and more) but I'd not have room for the pictures.

Or the fact that Richard also designed the software for the Kotipu Place Observatory, just north of Wellington in New Zealand.

http://homepages.ihug.co.nz/~rhudson

Contacting AU

graphics@acornuser.com
John Cartmell



1 The Courtyard, Southwell Business Park, Portland, Dorset DT5 2NQ
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NEW "Starting Points" a new graphics tutorial from Dave Cowell. This tutorial, although useful for newcomers to Photodesk is not application specific, so can be used for any bitmap editor on any platform. £24.95

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A presentation Package on CD-ROM:

Version 2 now has Powerpoint export.

OHP is a screen-based presentation package for use with RISC OS computers

OHP lets you compile Presentations comprised of a number of graphics files, which you create or purchase outside OHP, and show them on your computer's VDU as a full-screen presentation. OHP has facilities to order the graphics, give them consistent styling, add sound effects and help you present them to an audience. If you have access to an electronic projector, you can use that to project the presentation onto a screen.

The read-only version, OHP_Show (which is Freeware) can be given away with your presentations or used on any number of computers; this makes OHP presentations an ideal way of communicating or advertising.

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Hardware prices are constantly changing, please contact me for quotes on Cameras, Scanners, printers and other graphics devices.



Keeping in touch

Whether you're across the road visiting friends, across the country at the Wakefield show or across the world on holiday in San Diego, you can keep in touch with your home e-mail and choice of Usenet news using the power of the Internet. All you need is a Web browser and a few minutes of online time.

Many ISPs already provide Webmail facilities on their own sites, but as with Demon Internet's WebMail service, you may not be able to reply to a message, check spelling or attach files to your reply.

Twigger is new service that enables you to use all the basic e-mail functions you have on your computer, but from anywhere in the world. By arrangement with over 370 UK ISPs and in nine European countries, *Twigger* can contact their POP3 mail servers and examine your waiting e-mail and display it in Web page format.

You can reply to the messages using any valid e-mail address you like, but your access address is embedded in the outgoing headers. To use the service, just go to **www.twigger.co.uk** and enter the e-mail address and POP3 password of the account you want to check.

To keep up with the news from abroad, try the **www.mailgate.org** Web site that allows you to read, search through and post messages to Usenet newsgroups from a Web browser. Mailgate.org lists the available newsgroups hierarchically in a series of nested menus, so all nine comp.sys.acorn newsgroups are found on the second-level "comp." page.

Individual messages are listed in thread or chronological order five hundred at a time, with sensible follow-up indenting that stays on the page. Searching is possible on newsgroup names, while at message level searching by keyword is available on content.

When you click the button to write a newsgroup message, your e-mail client is invoked pre-addressed to the newsgroup, and when replying to the group, correct Subject and References fields are inserted at the top of your e-mail. The complete "alt." groups section is discreetly absent, so the pages are quite safe for family viewing.

ADSL OK?

The ADSL (Asymmetric Digital Subscriber Line) "always-on" digital high-speed data service is currently only available to those BT subscribers whose telephone line length to their ADSL-equipped exchange is less than 3.5Km.

Whichever ISP you choose to supply ADSL, first the service supplier BT Ignite will test your existing line for noise, capacitance, quality and length. You can try a line length test yourself by using one of the BT engineering test numbers, but beware that the reported result can be misleading.

BT's installation team are working flat out to install ADSL lines, so to avoid making their jobs any harder than they already are, please only attempt this test late at night. On a BT line dial 17070, and when prompted by the nice BT recorded lady, dial 3 then 1, then 2.

You will then be asked to "clear down", which really means hang up! A few moments later the automated test system will ring you back with the result. The actual tests performed by BT Ignite are more accurate and may give different results. If you are lucky the line length report will be inside the limit.

Now all you have to do is work overtime to afford the huge monthly rental for ADSL service. For further impartial information on ADSL and Broadband connections, go to **www.net4nowt.com/broadband/links.htm**

In brief

NavaHOW

Mike Gilbert's quick guide helps RISC OS users set-up the freely downloadable Navaho server suite as a cacheing proxy for Castle Technology's *Oregano* browser. Time can be saved and browsing speeded up by running Navaho as a proxy server to fetch and store pages and images locally for Oregano to access. Although Navaho can do much more than just proxying, it has been made freely available for Oregano users on the Castle Web site at **www.castle.org.uk/Support/Oregano/Navaho124beta.zip**

Navaho Cache Setup
www.tme.co.uk/documents/Navaho.txt

Ooer! IEURL

Stuart Halliday has released some freeware to tempt you to the Quantum Software Cybervillage Web site. *IEURL* is a simple utility to enable RISC OS browsers to use Windows Internet Explorer 4 and 5 "Favorites" files. As long as IEURL has been "seen", and the source IE file has a URL filetype, double-clicking it will load IEURL. The RISC OS browser is then launched and loaded with the URL in the file plus you can export the entire file.

IEURL
www.cybervillage.co.uk/acorn/qs/free.stm

snd txt m$ges

There's a sudden proliferation of Web sites offering free SMS text messaging but most use Javascript code that severely tests most RISC OS browsers.

Fresco goes haywire on the Lycos version at **www.lycos.co.uk/service/sms/** but Oregano can cope with it, if you keep clicking inside and outside the text entry box to update the character count. You can also send messages directly from your computer with Alex Macfarlane Smith's SMSTrans, which makes a separate phone call.

SMSTrans
http://vs20-382874a3.dsvr.co.uk/programs/sms.shtml

Contacting me

David Dade:
comms@acornuser.com



Take it easi with HTML

Written by Chris Bell, *EasiHTML* checks and repairs broken links within groups of HTML files. This is invaluable when saving 'Split at break' HTML files from *EasiWriter* and *TechWriter*.

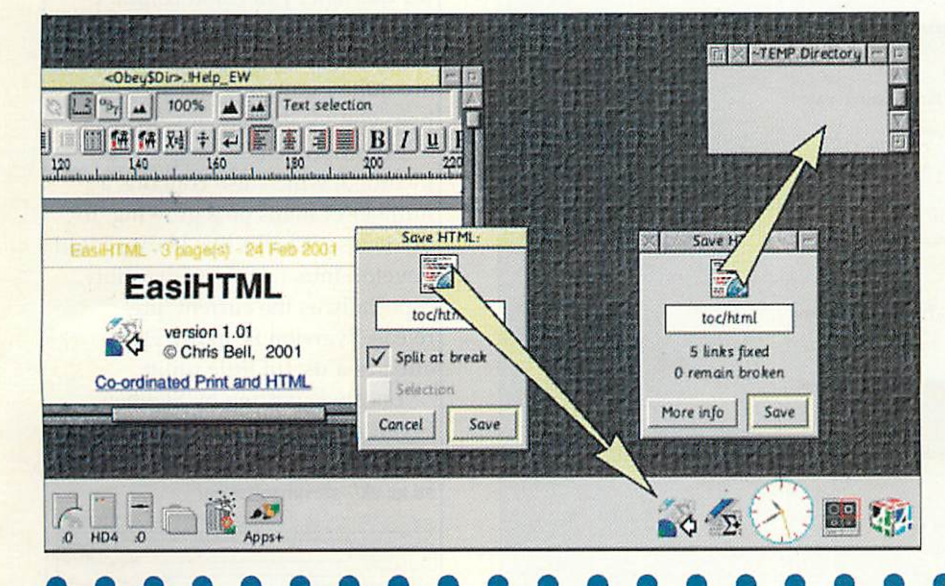
Quite often, when saving documents as multi-part HTML Web documents, a link refers to an index or reference on the contents page. Due to the nature of saving multiple files, this can sometimes cause the poor computer to get confused and link to the page you're currently on, rather than the top of, say, the first page. This is where *EasiHTML* comes in, as you can simply drag your save icon onto the *EasiHTML* icon and it will re-process the file before presenting you with a new save box, from which you can save the modified (fixed) HTML files.

It works by scanning all links within the same file (or directory), then all links within files (or directories) at the same directory level and finally by matching links as close as possible within the wider directory structure.

Any broken local links and anchor names are mended, as are surplus ../'s from links. Additionally, *EasiHTML* can add graphical navigation buttons to replace the *Easi/TechWriter* Top, Next, Back and so on, textual links.

In addition to fixing broken links and anchor tags, *EasiHTML* provides an HTMLCoord stationery pad for *EasiWriter* which will help you create documents which will look similar when printed as a hard copy or when saved as Web pages. This is handy because it allows users to print sensible A4 pages from their Web browsers.

EasiHTML is freeware and available to download from Chris' Web site at **www.argonet.co.uk/highpath/comput_/Pt03.htm**



Welcome to RISC OS 4

Welcome is a RISC OS 4-only application which allows you to customise the start-up banner. It's written as a RISC OS 4 plug-in and as such, integrates with the standard RISC OS configuration to provide an easy option to set which banner you require.

You can add new banners at any time. Just create your own sprite, called 'banner', 500 x 280 pixels and save in the *Welcome* directory. A facility to open the 'banners' directory is available from the *Welcome* setup screen, to ease navigating your directories.

From the *Welcome* configuration panel, you can choose from menu showing the list of banners available and a Preview button lets you view the selected banner.

Welcome was written by Paul Nolan and is available to download from his Web site at **www.geocities.com/koumekotake/software.html**

It is the easiest to use utility I've found for enabling users to select their start-up banner, but it does require RISC OS 4 — which you've all got anyway, haven't you?

Top Twenty Links:
Courtesy of www.riscos.org

No.	Description
1	ArcLynx - RISC OS port of the text based web browser Lynx, by Andrew Wood [more] Homepage: http://www.cus.umist.ac.uk/~ivarch/acorn.html Status: ?
2	VideoPlus - converts VideoPlus codes into times and dates and vice vers, by James MacDonald [more] Homepage: http://www.netbook.demon.co.uk/ Status: Freeware
3	VProtect - Latest virus protection module, by Pineapple Software [more] Homepage: http://www.pineaple.demon.co.uk/instv.zip Status: ?
4	SplitMPEG - convert from MPEG to Acorn Replay, by Unknown [more] Homepage: ftp://ftp.argonet.co.uk/pub/Acorn/PD/Graphics/ Status: Freeware
5	Citation - A bibliography manger for handling the references in scientific and technical papers. Incorporates the features of Endnote and Papyrus with the useful drag-and-drop of RISCOS., by Dr.Tim Dawson [more] Homepage: http://www.darwin.u-net.com Status: Shareware
6	POPstar2 - Improved version of POPstar, by Joseph Heenan [more] Homepage: http://www.ping.demon.co.uk/acorn/ Status: ?
7	DigitalCD - A desktop music player for RISC OS, by André Timmermans [more] Homepage: http://www.geocities.com/SiliconValley/Horizon/4471/dev.htm Status: Freeware
8	MP3Radio - A RISC OS client for playing internet radio stations using audio MPEG streams, by Philip Hardy [more] Homepage: http://www.philspages.co.uk/downloads.htm Status: Freeware
9	Flash - A slightly improved version of Leo's Flash player, by Henrik Pederson. [more] Homepage: http://login.dknet.dk/~henrik/ Status: ?
10	Acorn files - Various 'official' Acorn patches and updates., by Acorn [more] Homepage: http://www.acorn.co.uk/ftp/riscos/releases/ Status: ?
11	Zap - Arguably the best RISC OS text editor (well, it's my favourite!), by Mixed [more] Homepage: http://www.zap.uk.eu.org/ Status: ?
12	ArcWeb - The best freebie web browser for Acorn machines., by Stewart Brodie [more] Homepage: http://louis.ecs.soton.ac.uk/~snb94r/arcweb/arcweb.html Status: ?
13	VideoPlus - RISC OS port of the DOS VideoPlus codec, by James MacDonald [more] Homepage: http://www.netbook.demon.co.uk/ Status: ?
14	GraphWorks - User-friendly interface to graph-plotting program with numerous options., by Aurelien Botman [more] Homepage: http://www.srcf.ucam.org/~ab384/graph.html Status: Freeware
15	FTPc - GUI FTP client for RISC OS, by Colin Granville [more] Homepage: http://www.ftpc.iconbar.com/ Status: ?
16	Yass2 - 'Yet Another Screen Saver': says it all really , by Ian Palmer [more] Homepage: Status: Freeware
17	!Boot and Module Database - Paul Vigay's database of module version numbers and !Boot information., by Paul Vigay [more] Homepage: http://www.vigay.com/riscos/mods.html Status: ?
18	WavEdit - A disk based WAV format sample editor, by Robert Hancox [more] Homepage: http://www.tophole.freeserve.co.uk/software/wav.htm Status: ?
19	NeoPocott - A Neo Geo Pocket emulator, by David McEwen [more] Homepage: http://neopocott.emuunlim.com/index.html Status: Freeware
20	Chockcino - Java 1.1 virtual machine, by Peter Naulls/Warm Silence Software [more] Homepage: http://free.prohosting.com/~chocky/ Status: Commercial

Lost something?

Locate is a useful new utility for locating those elusive files on your hard disc. Not only can you search for wildcarded filenames on any of your discs, but *Locate* will also allow you to set other conditional criteria such as only searching for files of a particular size or filetype.

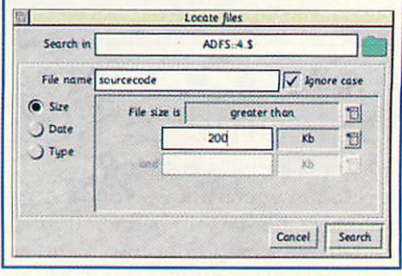
There are numerous options so searching for files can be pretty specific and all terms are in straight forward English, so for instance you could search for specific files that are bigger than 200K or files created before a certain date, or even set it to only search for files created between two particular dates.

The usual convention of using # and * characters to represent any individual or group of characters is also supported.

Search criteria can be mixed so for example, you could combine size conditions with date or type conditions too, so the combinations are quite numerous and should help you locate that elusive file.

A comprehensive help file is included, which also contains a number of items on a growing 'to do' list, so it looks like Locate could develop into a very handy utility, especially as the current 'pre-release' version is, in my view, already a useful little utility.

Locate is written by Stephen Fryatt and can be downloaded from his Web site at **www.tardis.ed.ac.uk/~stevef/software/**



Contacting AU

Paul Vigay:
pdpage@acornuser.com

Going solo

Paul Richardson reports on the success of his new transportable RISC OS computer

Much has been written over the years about how horrendously power hungry PCs are, and how amazingly light on power RISC OS computers are — to the point where bog-standard mains power supplies refuse to kick into operation because they are sure there's nothing connected to them.

However, in the Old and New Worlds no one really cares about that — since you can just plug into the mains why worry that your machine is absorbing at least 20 times as much power as it needs.

In the Third World the situation is completely different, power just is not available from a hole in the wall — in fact there aren't that many walls. Yet the development of these countries is severely hindered by the inability to use high technology in the low technology environment.

Enter a brand-new ruggedised RISC OS computer intended for use within Third World countries where it's ultra-low-power design enables it to be used indefinitely away from sources of mains electricity.

Need a power station?

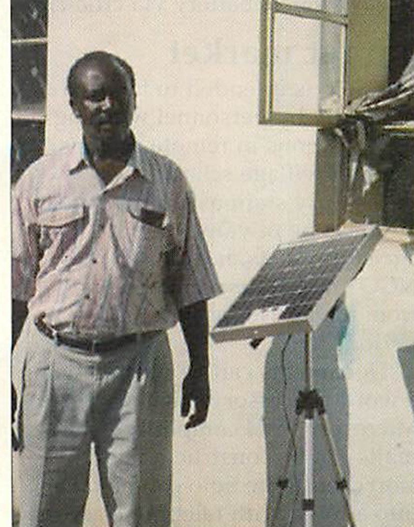
Solo is a transportable rather than a portable computer and it is designed for ease of relocation within harsh and demanding environments. It can be supplied in a variety of configurations and screen sizes the pictures here show it with 13.3in TFT LCD panel at XGA resolution (1024x768).

The mouse can be replaced by a 3-button touch-pad because the insidious red African dust gets into just about any moving part and will cause trouble after a very short time. The sealed miniature keyboard measures 280x130mm and provides 83 keys.

The production units will be a single-box design with the LCD screen in front of the computer motherboard. The entire device will be solid state — avoiding any need for a hard drive with its easily ruined moving parts — incorporating a derivation of RISC OS in ROM, applications in Flash RAM and the usual RAM for workspace.



The prototype machine uses a tiny 17 Watts of power including the LCD screen but still employs a small disc drive unit and squanders a further 5 watts on driving the screen using analogue signals. This compares to the RiscStation R7500, the lowest power consumption RISC OS desktop machine, which draws about 40 Watts including hard drive and CD.





The final design of Solo, with integral screen and no hard drive, is expected to draw only 8.5 Watts permitting it to be run from a single 10W solar panel, and still leaving a little spare to charge a battery.

Just to give you an idea of the different consumptions, a typical Pentium PC system takes up to 500W. So the power needed to run one of these would drive nearly 60 production Solos.

The prototype has been tested with a few other power sources



which include:

- Mains power-pack (15v DC)
- 12 volt 2 Amp/hour lead-acid battery in belt-pouch
- Car cigar-lighter socket
- 24v vehicle battery via croc-clips

Target market

The Solo is intended to be used primarily by personnel working for organisations in remote regions, possibly village schools, missionary stations and clinics. It will also be of value to agriculturalists, health workers and NGO's who must remain away from their base for indefinite periods.

Documents can be written using a word processor which provides Microsoft *Word* compatibility. E-mails can be constructed and stored until the Solo can be taken into a town with telephone access. It can also be connected to a desktop computer for the transfer of files and sharing access to a printer using an inbuilt utility.

The rectangular casing used will differ between manufacturers and initial discussions in Africa have suggested a carved wooden surround. The Solo does not have to pass electro-magnetic radiation tests, although emissions are known to be very low.

Initial costings suggest a base price commencing at $1000 (US) including basic RISC OS applications together with a word-processor (MS Word compatible), and a full Internet suite.

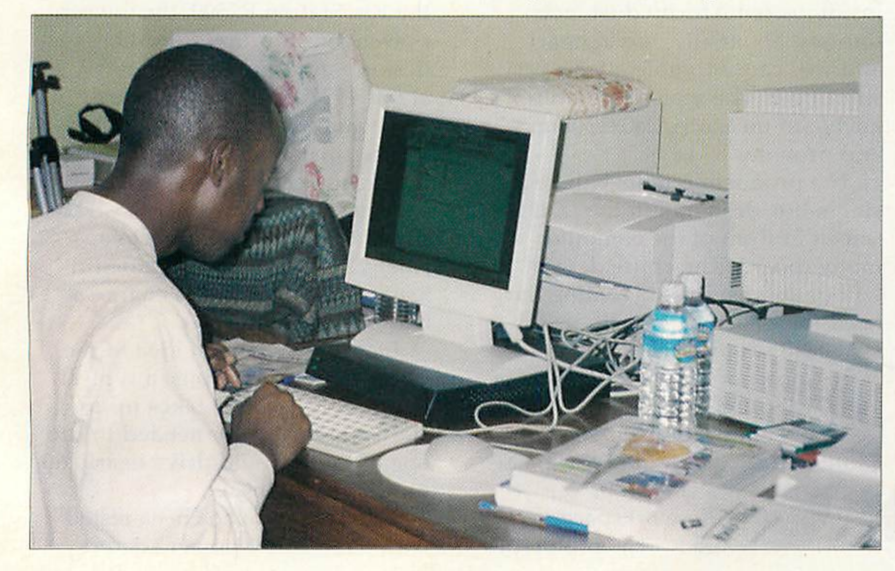
For use in missionary work, ExpLAN will license a copy of its *HolyBible* application, for which modules already exist in Kinyarwandan and Swahili.

Go Solo, Go Green

The Solo complies with the aspirations of the signatories of the Earth Summit in Rio, 1992, which pledged the greater use of sustainable energy sources. Agenda 21 was the significant outcome of the Rio Summit which created a global action-plan to reduce global warming and promote bio-diversity.

While many Western countries have yet to comply with their obligations under Agenda 21 convention, the lack of sufficient power to run thirsty IT equipment is a serious brake on technological development in developing countries. Solo will alleviate this restriction, while simultaneously permitting compliance with Agenda 21 on the part of the Developing World — which makes them rather more righteous than us.

And as these words are being written large parts of Silicon Valley in the USA are under rolling power-cuts due to their inability to provide sufficient electricity to power the air-conditioning required to extract the excess heat from their PC-equipped offices. It is estimated that it takes a further 100Watts to cool a 500Watt PC (which adds another 12 Solos to the estimate — let's say a round 70). Further information on this topic



What's the buzz

There is an eco-buzzword that it's time for you to learn: Eco-footprint. Which refers to the degree of effect on the planetary Ecosystem. While power consumption is a significant part of that in computer terms you also have to look at power and resources used in construction and also the useful lifetime before replacement enters in as well as recyclability.

For example, you can look at the production of the core

processor: The ARM chip, being simple, has a high yield and little wastage; the Pentiums have a low yield and high wastage. Hence a bigger eco-footprint in that area. Or there's useful life: RISC OS machines are renowned for their useful lifetime; PCs are notorious for the fast replacement time.

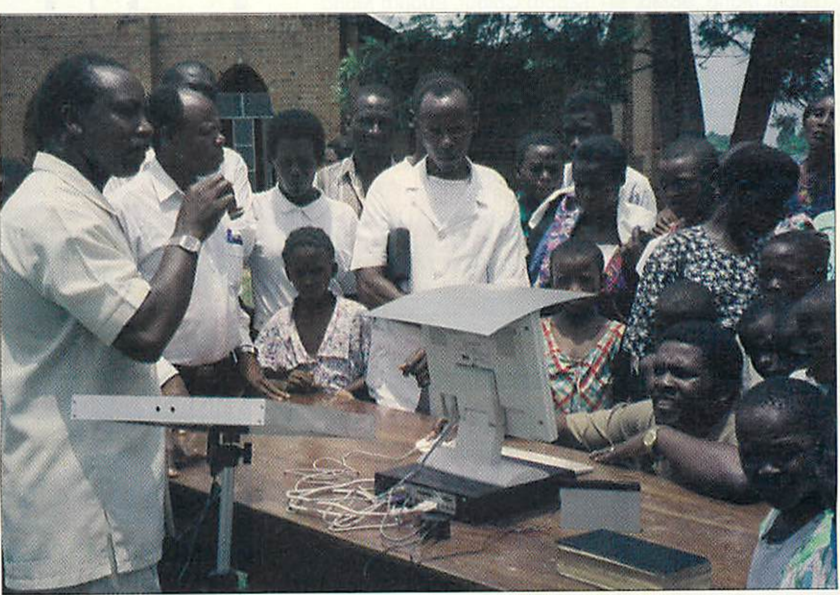
It's clear to see that RISC OS machines have a small eco-footprint compared to PCs, and it's even clearer the Solo has the tiniest footprint of all.

can be obtained from the UN Forum on Environment and Development UNED, or the UK site on the implementation of Agenda21 at Project PlanetEye which is constructed on eco-friendly RISC OS computers.

Here's to a more eco-friendly future. Check it out at:

www.explan.co.uk/hardware/solo.shtml

END



The Solo prototype being admired at a village near Kihihi in Uganda, 80km south of the Equator. Notice the solar panel in the foreground pointing almost directly up as it is 20 days before the equinox at 1pm. The thin lead-acid belt-pack battery is visible to the right of the Solo. It is usually being trickle-charged, but also provides sustained power when an over-inquisitive hand is waved across the solar panel.

Display options

Solo will be offered with a number of different LCD display options. These are expected to include:

- 8in SVGA (800x600)
- 13.1in SVGA (800x600)
- 13.3in XGA (1024x768)
- 15in XGA (1024x768)

Some models will be supplied with optional touch-screen technology, which will display an on-screen keyboard if one is not already plugged into the main unit.

Specifications

Solo is intended to be built by companies created for that purpose in developing countries. As such the exact specifications and range of options will remain the decision of each licensed manufacturer. However guideline specifications are as follows:

	Prototype	Production unit
Processor	ARM-7500	ARM-7500
OS	RISCOS 4.03 in 4Mb ROM	RISCOS 4* in 5Mb ROM
Memory	16Mb + 750Mb hard-disc	128Mb or 256Mb RAM
Display	Analogue 13.3in TFT LCD	Digital 8in, 13in or 15in LCD with touch-screen option
Power	12-30v DC at 17Watts	6-40v DC at 8.5Watts, and in-built cache battery
Weight	15Kg incl batteries, solar panels and tripod in briefcase	< 8Kg
Ports	Video, parallel, serial, keyboard, mouse, 10baseT Ethernet	As prototype, plus USB, and optional built-in modem

Open Mon-Fri 10-18.00 hrs **(All prices INCLUDE VAT)** Carriage not included. **Tel: 0845 458 0778 (Local Rate)**

RiscOS Computer Systems (Carriage £15)

All RiscPC's include Easiwriter Prof with MS Word 6/7 compat., Resultz.

Computer Model with	15" Monitor	17" Monitor	No Monitor
NEW MicroDigital Omega	£1299	£1374	£1174
The ALL NEW RiscOS 4 Computer - Call for availability			
287MHz SA, 20Gb HD, 52x CD, 64Mb PC133 SDRAM			
Kinetic RiscPC - RiscOS and applications now run at 66MHz (up from 16MHz) ON the SA233 Processor Card for even greater speed!			
RiscPC Kinetic 138Mb Internet	£1540	£1630	£1405
- 128Mb(66MHz) SDRAM, 8Mb DRAM, 2Mb VRAM, 30Gb HD, 40xCD, RiscOS4			
RiscPC Kinetic 70Mb	£1305	£1395	£1170
- 64Mb SDRAM(66MHz), 4Mb DRAM, 2Mb VRAM, 10Gb HD, 40xCD, RiscOS4			
RiscPC WebWizard 34M, 8GHD, 40xCD	£1305	£1395	£1170
- Web Wizard includes Oregano, External 56k modem,			
RiscPC233TCD 18M, 4GHD, 40xCD	£1165	£1255	£1030
Riscstation NetWORX 8Mb, No HD, 10BaseT	£604	£694	£469
Riscstation R7500 Lite 16Mb, 4GbHD, 48CD, 10BaseT	£721	£811	£586
Riscstation R7500 Lite+ 64Mb, 8GbHD, 48CD, 10BaseT	£815	£905	£680
Acorn Sprinter NC 16MB, 10BaseT with Mse/Keybd	£485	£575	£350

We only use quality monitors which are Samsung SM550S for 15" and Samsung SM-750ST for 17"

AT140 ISDN Hub/Router New £250c

Connect up to 4 computers to the Internet with just ONE single ISDN dial-up[1] internet account!

This amazingly easy to use unit is suitable for RISC OS, PC, Mac & Unix computers and compatible with BT ISDN/HomeHighway services. It provides;

- 128kbps Multilink PPP ISDN with compression & PAP/CHAP security.
- Connection to TWO ISDN sites simultaneously.
- A FOUR port 10BaseT Hub for networking to each computer[2].
- TWO analogue telephone ports for standard telephones, faxes & modems.
- DHCP Server for automatically configuring computers for the network.
- Built-In Web server for configuration & diagnostics[1].
- Built-In Telnet server for configuration & diagnostics[1].
- Flash upgradeable for user-installable future firmware upgrades.

Ring now for further information.

[1] - ISDN line and ISP account not included. [2] - Each connected computer must be equipped with a 10BaseT network card. NOTE - PSU, Network cabling for ONE computer and ISDN Cabling is included with the unit.

Tektronix®

Colour Laser Printers (Carr £18)

Phaser 750P A4 Full 1200 dpi **£2400**
- 4ppm Colour, 16ppm Mono, 96Mb,
- 10/100Ether, Parallel, Level 3 PS,
- PCL5, 136 Fonts, 1yr On-Site warr.

Phaser 750N A4 1200x600dpi **£2000**
- 4ppm Colour, 16ppm Mono, 64Mb,
- 10/100Ether, Parallel, Level 3 PS,
- PCL5, 136 Fonts. 1yr On-Site warr.

Tektronix Consumables

750 Lrg Black Toner	£Call
750 Lrg CMY Toner	£Callea.
750 Fuser	£Call
750 Fuser Roll	£Call
750 Imaging Kit	£Call

The price of colour consumables are PER colour.

OKI New

Colour Digital LED Printers (Carr £18)

C7200 A4 1200x600 dpi £1850
- 12ppm Colour, 20ppm Mono,
- 64Mb RAM, Parallel, Level 3 PS,
- PCL5, 136 Fonts, 530/100 Sheet
- Paper Trays 1yr On-Site warr.

C7200N A4 1200x600 dpi £2025
- 12ppm Colour, 20ppm Mono,
- 64Mb, 10/100 Eth
- Parallel, Lev 3PS,
- PCL5, 136 Fonts,
- 530/100 Sheet
- Paper Trays 1yr
- On-Site warr.

LinServer Internet Gateway

LinServer - An Internet Gateway & File Server running LINUX (UNIX® for PC's) which supports PC, NC & RISC OS Computers

E-Mail, News, Printing, Time, ISDN, Dial-IN, Programming, Dial-OUT, Modem, Telnet, File, Web

LinServer is an incredibly robust and dependable File, Print & Internet Gateway server providing virtually every internet resource AND it doesn't cost the Earth! There are NO licensing issues on the number of users supported. LinServer supports over 10,000 users, the limit being only storage capacity and RAM. It supports PC's, Network & RISC OS computers. You can literally place this server in a secure room and forget about it, being almost completely self maintaining except for user administration.

Standard features;
NFS, LanMan file server
- with disc quota's
POP3/4, SMTP
- Mail Server
NNTP News Server
Web/Proxy Server
FTP Server
Printer server
Fax Server
Internet dial-on-demand
- using ISDN or modem
Dial-in modem access
Web Based Admin Tools
... Plus many more.

Contact us now to for further details or to arrange a demonstration.

See Us At Wakefield

Open Mon-Fri 10-18.00 hrs **(All prices INCL...** ...not included. **Tel: 0845 458 0778 (Local Rate)**

Active 200W Speakers

Incredible sound for the price

£15c Inc VAT

200W (PMPO) Speakers

Kinetic StrongARM Upgrades

The NEW Kinetic StrongARM contains on-board 66MHz SDRAM for even more speed.

Kinetic (64Mb) Processor £468c
- Includes RiscOS4. This upgrade is
- suitable for users with ARM600/700
- who have not yet upgraded to RO4

Trade-Up SA & RiscOS3.70 £410c
Trade-Up SA & RiscOS4 £351c
For 128Mb SDRAM version add £81

SCSI I/II Cables £6 each

- 25D - 50C 1m SCSI I Cable
- 25D - 50HPC SCSI II 1m Cable
- 50C - 50C 1m SCSI I Cable
- 50C - 50HPC SCSI II 1m Cable
- 50HPC - 50HPC 1m SCSI II Cable
- 50C SCSI I Terminator
- 50HPC SCSI II Terminator

SCSI III Cables £12 each

- 68HPC - 50C 1m SCSI III Cable
- 68HPC - 68HPC 1m SCSI III Cable
- 68HPC - 68HPC 1m SCSI III Cable
- 25D - 50C 1m SCSI I Cable

Carriage 1 Cable £4, 2 - £6, 3 - £10

Oregano Web Browser

Single user £57a
Primary Site Licence £233b
Secondary Site Lic. £468b

Features include;
- Fast
- Full JavaScript support
- SSL 3.0 40/128bit for full security
- Support for add'l Plug-In's for Java
- HTTP Put, FTP Fetch
- Frames & Table Support
- PNG Image Support
- Support for TrueType Fonts
- Suitable for RiscOS 3.50 or greater
- Cookies, Plus many more...

Memory

Prices strictly whilst stocks last.

64Mb SIMM £85a
32Mb SIMM £50a
1Mb VRAM 2nd user £20a
2Mb VRAM £79a

Memory prices vary on a daily basis, please call to confirm prices. Call for details of other memory.

Hard Drives

Carriage: a=£4, b=£10, c=£12

Q'tum 15Gb IDE £85b
Call for other HD sizes
Cumana SCSI II £150b

I³ Networking

All cards are 10BaseT only

A30X0 E'Lan 101 £Callb
Archi E'Lan 511 £Callb
RPC/A7 E'L'n 601 £Call

All ethernet cards include Access+

Psion Accessories

Carriage: a=£4, b=£10, c=£12, d=£15

Autoroute Express £10a
- one of the best PBII/3a packages
Psion/PB Mac Link £10a
3/3a Mains Unit £10a
Ser.5 Mains Unit £10b
Backup Battery £2a

Hardware Upgrades

2nd Slice w/o PSU £90c
Citizen HD Floppy £15b
- Suitable for all machines except
- A3000, A300, A400, A540 series
- machines. Please note this drive
- respects the HD hole explicitly ie
- you cannot format HD discs to DD.
Joystick I/F (Not Risc PC) £5b
Orig Acorn Mouse £20a
RISC OS 4 u/g £116b
Scart Cable (9 pin) £12a
Windows '95 CD £50a
- Can be installed without any prev OS

Monitors (Carr £15)

Archimedes will require an adaptor £12

Samsung 15" £125
SM-500S FST, 0.28" dp, 1024x768, 30-54kHz & pre-sets.

Samsung 17" £200
SM750ST or DF FST Tube, 0.28"dp

RiscPC Upgrades

233T StrongARM £299b
- Incl. RISC OS 4.02
233T StrongARM £269b
- Incl. RISC OS 3.70
233T StrongARM £246b

Printer Consumab's

Prices strictly while stocks last

Epson Cartridges

S020047 Black	£12a
S020089 Colour	£12a
S020093 Black	£12a
S020108 Black	£12a
S020189 Black	£12a
S020191 Colour	£12a

Canon Cartridges

BC-02	£12a
BC-21	£20a
BCI-21Bk	£8a
BCI-21C	£12a
BC-22 Photo Cart	£20a
BCI-60 Black	£20a
BCI-61 Colour	£15a
BJI-201HCbk Black	£9a
BJI-201bk Black	£6a
BJI-201C/M/Y	£8 ea.

Hewlett Packard

HP51625A Colour	£24a
HP51626A Black	£23a
HP51629A Black	£23a
HP51649A Colour	£24a

CD-ROM Software

Corel Photo Sampler CD	£5a
Hutch Encyclopedia 92 for RiscOS	£2a
Hutch Encyclopedia 97 for PC only	£2a
RiscDisc Vol 3 CD	£5a
TopicArtCD (DTP)	£2a

Games (Carr. £4)

Prices below whilst stocks last

Birds of War (4D) 2Mb	£5a
Carnage Inc (4D)	£5a
E-Type II RiscPC (4D)	£5a
E-Type Compendium (4D)	£5a
Frak (A7000/RiscPC)	£10a
Gods (Krisalis)	£5a
Holed Out Compendium (4D)	£5a
Last Ninja	£5a
LogicMania Compilation (4D)	£5a
Shuggy	£5a
Virtual Golf Augusta Course (4D)	£5a
Wolfenstein 3D (SA Compatible)	**£5a**

Applications

100 Monotype Fonts	£10a
ArcFax	£30a
Compression	£5a
Desktop Database	£10a
FastSpool+	£12a
HTML Edit 4+	£30a
Magpie (Longman)	£10a
Mr Clippy Site Licence	£15a
Oregano	£57a
PC Pro v3	£70a
Shares5	£10b
ShapeFX	£5a
SparkFS	£24a
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10/10 Series £5a each
Maths (Algebra) (6-16), Maths (Statistics) (6-16), Maths (Geom'y), (6-16), Essential IT.

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Terms: All prices include VAT except books. Carriage is not included unless otherwise stated. *Carriage charges apply* to mainland UK (excluding remote areas, Scottish Highlands, Channel Islands, IOM), elsewhere at cost. Orders MUST be accompanied by a phone number. Prices and spec's subject to change without notification. Goods subject to availability. Goods not offered on trial basis. Re-*stocking fee on non-faulty* returns. Educ Inst official orders accepted. E&OE.

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MAY 01

Phew, what a scorcher

Brian O'Carroll reports on the computer that came in from the cold

I am going to start badly by making an assumption — that you're familiar enough with the RiscStation R7500 computer that I can skip expounding upon its features and simply refer you to the technical specification. That done, please don't feel cheated as this expedience means that I can now nail down a particular model and its central feature—the CD writing capabilities of the RiscStation R7500 Scorcher.

Bundled with this model is *CDBurn*, by Warm Silence Software, which gets the bits and pieces of data onto a blank CD. The version I had for review was a beta version 1.57, which still had some instability. Hence, I was not able to try out every facility successfully, but I will try to describe the how the software should work once the current debugging cycle is completed.

Burning Disks

To start at the beginning, we of the RISC OS persuasion can now create our own CD-ROMs in the comfort of our own homes using *CDBurn* and a CD-Writer such as the one included in the R7500 Scorcher.

There are two flavours of CD available to RISC OS users—the common-or-garden Audio disc, as demonstrated by Sheryl Crow (see later) and others, and the Data CD, otherwise known as the CD-ROM. Both are now well tried formats which, as is common with these things, when compared with the new all-singing-all-dancing DVD, are now all but out of date. However, they are by no-means out of fashion. A CD-ROM can hold 650 megabytes of data. The same disc can be used to record 74 minutes of audio recording — although Michael Jackson seems to be able to fit 77 minutes on, but he uses the unsafe edges of the disc, and never does his own stunts.

CDBurn Control Center

Create Audio CD | Filer-like Data layout | Data layout by given Dir. | Write Data CD | Copy CD | CD Tools

Audio Data

In the interests of journalism I deliberately copied some audio CD tracks onto a blank disc. Be assured that the resulting clashing of Oscar Peterson and Sheryl Crow does not now exist since I wasn't prepared to waste a perfectly good blank CD to create an illegal compilation in such bad taste.

Instead, I used the Simulate Writing option which goes through the whole procedure of writing the CD without actually burning the disc. This facility can be used to check, that at the rate at which you are writing the data, the computer can keep up with the rate of data transfer required by the writer. Errors thrown up by a simulation will warn of a potential problem in the real writing session.

Compiling your own CDs from a selection of audio discs is handled by a track compilation window. Each CD inserted starts off with a serial number and a list of untitled tracks. If you type in the title and names of these the *CDBurn* software will store them internally in a database, bring them up whenever that CD is re-inserted into the reading drive, and transfer the names to your compilation list upon selection.

To create a CD from your carefully compiled tracks the audio data needs to be sampled from each CD you've used in turn. This sampled data, the raw music data itself, is stored on hard disc and used to write directly onto your new CD recording.

A separate facility is provided for directly copying one entire disc to another. I simulated this at the highest speed (12) and received the confident 'Simulation completed successfully' message after about 10 minutes of pretending to copy an audio CD.

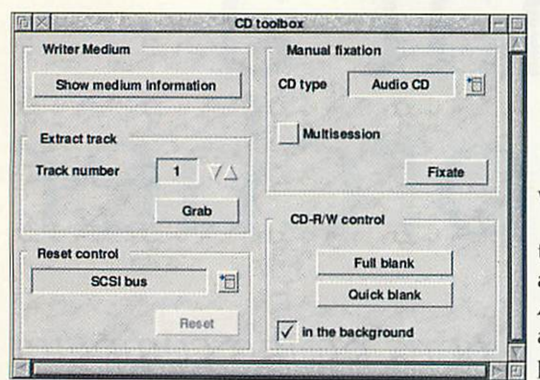
Data Data

When it comes to writing data (as in creating a CD-ROM) the RiscStation Scorcher R7500 has earned its keep as the machine that mastered recent *Acorn User* cover CDs. There are many more details to be concerned about when writing data than when writing an Audio CD. Important considerations include extensions, a tailored finish to the data that enables attributes such as RISC OS filetypes to be recorded with the data files even though these attributes are not part of the ISO data CD format.

The option exists to create a disc image first or to write 'On the fly'. The latter option can be risky as the additional work that has to be done can cause the process to fail, making the generated disc unreadable. A safer method is to create a disc image first, a file that is simply copied onto the CD when it comes time to write it.

Contextual writing

One day all computers will have CDwriters as standard. Maybe. For



now, the RiscStation R7500 Scorcher is the RISC OS computer that is available off the shelf with the CD writing hardware and software bundled with it. On the RISC OS platform writing CDs is a facility in its infancy despite the emergence of the next generation of multi-use devices, the DVD. *CDBurn* is under development still and caught in the awkward situation of being in demand and still needing time to develop.

A program's user interface can be as difficult to conceive as the code itself and *CDBurn*'s interface is strictly functional and un-fussy. A novice user will need a little time to understand how the parts of the software work together to create CDs, and that understanding in the user's mind, the 'user friendliness', is important to achieve if the facility to write CDs is to spread to other RISC OS machines, as I believe it should.

I hope Warm Silence Software will be able to pay attention to this area, making the software fun to use as well as useful.

You may gather from this that learning to use CDBurn as deadline day for the next *Acorn User* CD approaches is a trial by fire. Knowing in principle what you do — and having to actually do it are two very different things.

Having assembled your data in a suitable directory, you load up *CDBurn* and tell it where to look for its data. You specify the settings you want to use for the creation of the CD — whether to use the minimal ISO settings or to add different levels of additional information. Ultimately adding the information for Warm Silence's very own CDROMFS.

These higher levels ultimately let the CD look like a proper RISC OS disc, instead of something with blank file icons and unhelpful extensions.

From there you go to the disc image creation, as mentioned before you can write direct to the disc but, call me a wuss if you want, I'd rather not waste a disc if I don't need to. A common fault during this stage is to find that you've gone deeper than eight levels of directory — why does the ISO standard limit this? I have no idea. Anyway you may have to correct this before continuing.

Now there is a serious omission, I think, from the software available: A piece of CD emulation software. There have been several packages that pretend that a CD image is a real CD even down to mimicking the access time. This would be a further step to allowing testing to ensure that the finished product comes off the line more quickly.

Important lesson learned: If you have created one CD image but need to change it don't, under any circumstances, re-write over that same image. In other words, don't save a new image with the same name over the top of an old image.

The result is a mess but, without emulation software, you won't know until you've burned the CD and try to use it. Use a different name or delete the old image. WSS need to fix this. Finally you get to the burn stage which is fairly straightforward, just tell it which image to use and off you go. Assuming you've done everything else right this should be a doddle.

Conclusion

When connected to a small network this CD writer becomes a vital backup facility, the portability of CD-ROMs making this a powerful utility. Imagine you have to replace your computer after it is... well, eaten by the dog, say — do you really want to go to the expense of a SCSI card just to connect a specialised backup device to restore your old data? Preferable would be to have your data backed up onto CD-ROM which any new computer can read.

CD writers rule. Once you've got one, like getting a mobile phone, a faster CPU, or central locking for your car, you'll wonder how you ever managed without it, and you will never look back. END

R7500 Scorcher Twindex

56 Mhz ARM 7500FPE
RISC OS 4.03
64Mb 60ns EDO Memory
48x Atapi EIDE CDROM (On Scorcher Twindex only)
4x4x24 CDRW (minimum)
10.2Gb EIDE Hard Drive
4/6Mb ROM/Flash Memory containing RISCOS 4 and Utilties
Micro ATX Desktop or Mini/Midi Tower Case
Stereo Speakers
2 x Serial Port
2 x PC Style Game Port Supporting Midi In/Out/Through
2 x EIDE Ports
1 x 10baseT Network Port with Wake On LAN
1 x EPP/ECP Fast Parallel Port
1 x IRDA Infrared Interface Support
1 x High Density Floppy Drive Port
1 x 15Pin VGA Connector
Full 16Bit OPL3 Stereo Sound Sampler & Mixer with FM Synthesizer support 2 CD Mixer Ports
3 x 3.5mm Jack sockets for Line In/Mic/Headphone and Speaker Out
PS/2 Style Keyboard Input
PS/2 Style 3 Button Mouse Input
Bundled Software

Professional CAD

A selection of practical examples by the program's author, David Snell

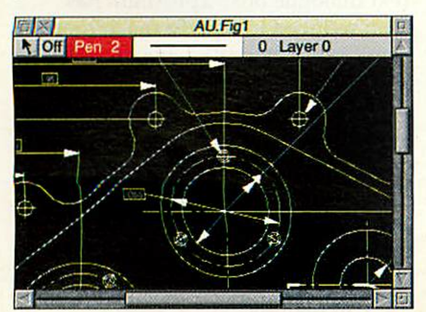
All the hints and tips in this article apply to *ProCAD+* Version 1.02. However, a few features are recent introductions and may not be available on your copy. The version 1.02 upgrade was sent, free of charge, to all registered users last July. Those features that came out after July will have a date beside them. You can find the date of your version by looking in the Info dialogue box, accessible from the icon bar menu for *ProCAD+*.

If you really need the latest version e-mail me or write to me, quoting your serial number, and I will send an upgrade package, free of charge. This offer only applies to those who have returned their registration cards, so if you haven't sent your card in yet, send it now. One or two items will also be applicable to *ProCAD Lite*, in which case [Lite] will appear beside them.

Working in the dark [Lite]

Most graphics and DTP software these days seem to use a white background, but this can be trying on the eyes after prolonged use. Some people prefer to work on a black background (Figure I) — so here's how to set one up:

Click Menu over the window showing the page and choose Misc. > Colours... The first option is Background. Click on it and use the dialogue box to make it black (RGB 0,0,0). If you now go and try drawing you will find that you have a problem. If you are using Pen 1, in all probability it will be black, so you are



now drawing in black on a black background.

All you have to do is repeat the process as for the background colour but for Pen 1 and make it white (RGB 255,255,255). While you are about it you might like to brighten the edit colour as it may not give enough contrast to be clearly visible.

The point of this exercise is to show that you have complete control over the colours. You may prefer to simply turn the white background into an off-white to make it easier on the eyes — it's up to you.

Once you have made your new background you can save it as an empty drawing file to create new drawings from or you could even do the job using a CSV file. To do this simply create a text file with *Edit* and enter the following two lines:

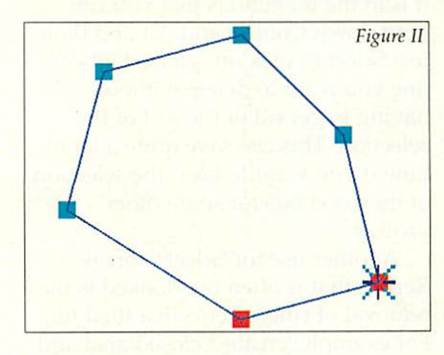
%%P0,0,0,0
%%P1,255,255,255

Save the file and change its file type to CSV. When you drop this file onto an unsuspecting *ProCAD+* drawing window you will set its background to black and pen 1 to white. CSV files are described in p163 of the *ProCAD+* manual. You might also like to investigate the DRAWCOL parameter on p128 if you want to make your changes more permanent.

Editing polygons and rectangles [Lite]

This one often trips people up. When you Adjust click on a shape in *Draw*, while not in Select mode, you will get the little blue squares at the vertices that you can move around with Adjust.

In *ProCAD+* there are more options. To see these in action, click on the Polygon tool and create a hexagon. If you now do an Adjust click on this, the dialogue box will open (if it wasn't already) and will show the side length. This means that you can change the side length and click OK to simply change the length of the sides at the same centre.


Figure II

However, this might not be what you had in mind and what you really wanted to do was to pull it about a bit as in *Draw*. To do this simply hold down Control while you do the Adjust click and — lo and behold — little blue squares. It should be noted that *ProCAD+*'s little blue squares are more versatile than those in *Draw*.

Try a Select click on a blue square. Instead of ending the edit as it does in *Draw* the square goes red. Adjust clicks on other blue squares make them go red as well (or blue if they were red). When you finally get round to Adjust dragging a red square, you will find that all the other red ones come too — holding hands, so to speak (Figure II). This means that a whole side or group of sides may be dragged as a unit.

And then, when you have made a complete mess of it, you can use Undo to put it back as it was.

Breaking up [Lite]

The break feature is one of the most useful in *ProCAD+* and choosing Select > Break > Repeat allows you to chop up a line (or curve or arc) into

Figures IVa and IVb

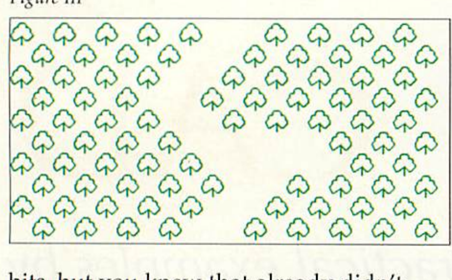


Figure III

bits, but you knew that already didn't you! What you may not know (and I know of quite a few seasoned users who had not spotted this one, though it is in the manual) is that you can hold down Control and Alt and then use Select to pick off selected bits of line you want to delete without having to get rid of the rest of the selection. This can save quite a lot of time if you want to keep the selection of the good bits for some other process.

Another use for Select > Break > Repeat that is often overlooked is the removal of single items in a tiled fill. For example: create a closed area and flood fill it with trees (or any other tiled fill) then select the fill and ungroup it. It should now appear as Area Fill in the status bar.

Now choose Select > Break > Repeat and you can pick off the trees one by one out of the woods — no chain saws, no tree preservation orders, fell what you like (Figure III). You can also use Select > Break > Repeat to take out lines in a ruled fill, but that is much less fun. Don't forget to ungroup the fill first.

Fun, as in Functions (19/08/2000)

With so many functions to choose from, some people have hours of fun setting up their key definitions file. This is the file called KeyDefs inside *!ProCAD+*. If you haven't got one, just create a text file with *Edit* of that name. All the active lines consist of a pair of numbers separated by a comma. Comments can appear after a semi-colon and blank lines may be used.

In general, the first number is the number of the key to define. 3 for Control+C, 65 for upper case A, etc. The function keys have numbers starting at 384 and are shown on p145 of the manual. As text is never typed on to the drawing page, but into a dialogue box, it means that all the characters are available to be used for user defined functions with the upper and lower case versions each available for a function.

The second number is the function number. There are literally thousands to choose from. One of my favourites is no. 196, which is enter a function! This may sound silly but it can save a lot of time if you just want to try a function out rather that have it taking up a precious key. I have attached it to a lower case 'f', so the line in my file for this is:

102,196

Now, when I press 'f', with the input focus on the drawing, a dialogue box opens, inviting me to enter the number of a function to use. (You can, of course, use the Misc. > Function option, but I find my 'f' key quicker.)

I said earlier that, in general, the first number was the key number, but there is an exception, and that is when it is between 5000 and 5099. This range of 100 numbers permit groups of functions to be combined into a single operation. We will try this out shortly.

There are 11 pages of numbered functions in the manual, from p147 to p157.

Here are a few new ones you probably haven't heard about:

209 Create an in-place copy
815 Create bounding rectangle in thin line with pen 1
337 Select !Draw line style
400 Fill Colour None
401 — 423 Fill Colours 1 to 23
425 — 431 Line pattern
435 — 437 Join Mitred, Round, Bevelled
440 — 443 Start cap Butt, Round, Square, Triangle
445 — 448 End cap Butt, Round, Square, Triangle

The codes from 400 to 448 all apply to *Draw* line styles.

Now to try out combinations. The key numbers 5000 to 5099 represent 100 locations into which a function number may be placed. They are all set to zero at start up and each combination group must end with a zero. So, here goes... type these lines at the bottom of your KeyDefs file:

47,5000 ; Attach the following code to '/' key
5000,209 ; In-place copy
5001,171 ; Convert text to group
5002,337 ; Select !Draw line style
5003,343 ; 2mm line width
5004,437 ; Bevelled joins
5005,302 ; Pen 2 (red)
5006,201 ; Put to the back

Once you have entered this you will have to re-run *ProCAD+* to load it. In order to try it out, create some text about 30mm high using, say, Homerton.Bold and select it. Then hit the '/' key (or 'f' and enter 5000) and — hey presto — it has gained a red outline, presuming that pen 2 is still red (Figure IVa). Note that conversions such as 171 are not undoable so your combinations will only be undoable if the individual functions are.

Let's just try one more. Type this in and try again with some big Homerton text as before.

92,5010 ; Attach the following code to '\' key
5010,815 ; Create bounding rectangle (it becomes the selection)
5011,336 ; Line style to Fill
5012,307 ; Pen 7 (yellow)
5013,201 ; Put to the back

This gives a coloured background rectangle to your selected text when you hit the '\' key (Figure IVb).

New 'Sym' button (13/08/2000)

A new switch button marked 'Sym' has been added at the right side of the Text dialogue box. '2pt Align' has been reduced to '2pt' to make room. 'Sym' is an alternative means of alignment. As the text is about to be created the message "Click on Symbol" appears in the message bar.

When an item in the symbol is clicked upon the symbol's angle is added to the angle in the Text dialogue box so that the text is aligned with the symbol. The angle in the Text dialogue box should be set to

Text
?
Left Mid Right Centre 2pt Sym
Offset Angle 0.0° Use User text
Line spacing 1.0000 Italics angle 90.0°
Width 6.00mm Height 6.00mm Kern
Enumerate from 1 step 1 qty. 1
Font Trinity.Medium OK

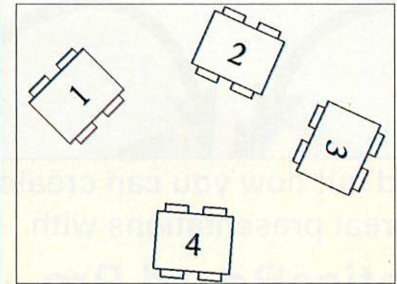


Figure Va (above) and the typical result in Vb on the right

that which would align the text correctly with the symbol at 0°. If the symbol is not found a bleep sounds and the text is not placed.

In order to identify the symbol you need to click on a part of it, so symbols that are to have text attached in this way would usually have Points located at the reference points for the text. These are then used in conjunction with Point snap.

For the sake of our example, I am going to use a 15mm x 10mm symbol representing a table in a restaurant. A point has been defined at the centre of the symbol. These tables will then be placed decorously, at various angles throughout the restaurant.

Set up your tool dialogue box to match that shown in Figure Va, including the single '?' character and click OK. Then click on the centre of each table in the desired order of the numbers and there you are (Figure Vb). The Enumeration feature increments the number and the 'Sym' button feature works out the angle.

Quadrant Snap

When the Snaps are accessed through their menu, additional writable sub-menus are available for some snaps. You can read all about this in the manual in chapter 5, but here we will just look at the Quadrant snap and some unusual uses of it.

Its primary function is to snap to parts of circles. Setting it to 12 would allow you to make a clock face, but did you realise that it would also allow you to measure the diameters and radii of isometric circles? In this example, sent in by Peter Tanner, we look at the use of Quadrant snap to draw the cut-outs in a spool.

Draw two concentric circles and set the Quadrant snap divisions to 12. Draw two radial lines at the positions shown, with 60° between them (Figure VIa). Use the Parallel tool to insert straight lines 5mm inside each of the two radial lines (Figure VIb).

Use the Fillet tool, with breaks enabled, to put 2mm fillets between each of the new lines and the inner circle and 5mm fillets between them and the outer circle (Figure VIc).

Delete the original 2 radial lines and also the ends of the other two lines that were broken by the filleting process (Figure VId).

Using the Select tool drag a rectangle to include all of the wedge shape. Select Group (F4) and with the quadrant snap still active select the centre of the larger (outside) arc as the reference point. Move the wedge away to one side (Figure VIe).

Using the circular option of the Multicopy tool in conjunction with the centre and quadrant snaps insert six copies equi-spaced around the inside of the outer circle from three 0'clock (0 degrees) (Figure VIf).

Insert a small circle and a large circle for the inside and outside of the spool (Figure VIg). Select and delete the two initial circles to complete the object (Figure VIh).

A quick copy [Lite]

To copy a selected item, just do an Adjust drag on it.

Keeping in touch

Charles Barraball, an avid user of *ProCAD+*, has set up an e-mail user group where users can exchange ideas or ask for help. To subscribe, just send a message to:

majordomo@lists.zynet.co.uk

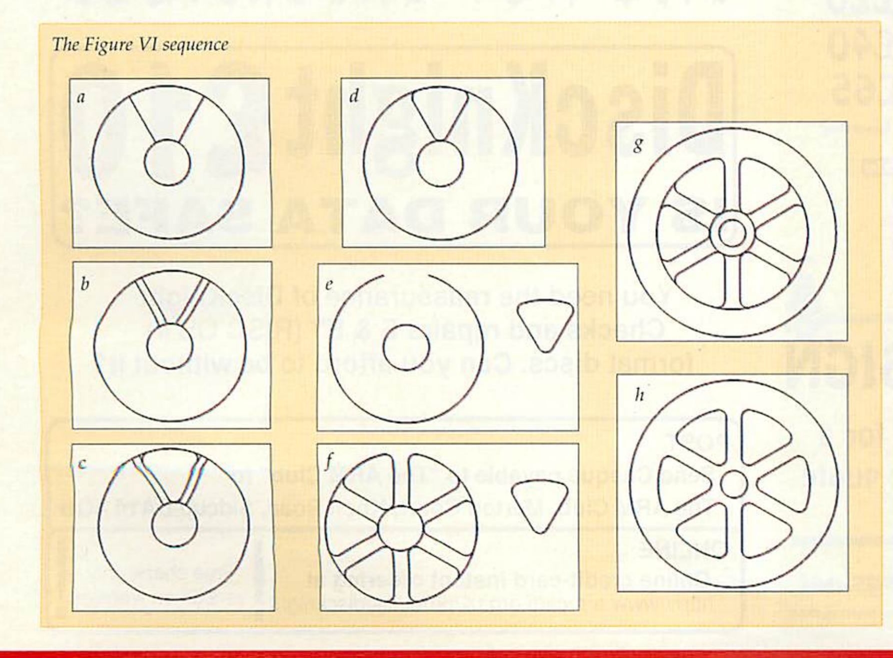
with no subject but with the message:

subscribe procad-users

Users' hints and tips are also posted on the author's Web site. A gallery of users' drawings has been proposed, so if you have any you wish to share/show off, send them in. Many thanks to all those who have sent in their hints and tips.

END

The Figure VI sequence



ProCAD+

Single user licence	£195+VAT
Licence up to 5 machines	£245+VAT
Licence up to 10 machines:	£295+VAT
Licence up to 20 machines:	£390+VAT
For more than 20 machines:	call for quote

ProCAD lite

Single user licence	£85+VAT
Licence up to 5 machines	£106+VAT
Licence up to 10 machines	£127+VAT
Licence up to 20 machines	£170+VAT
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Address: 35 Wrefords Close, Cowley Park, Exeter EX4 5AY, UK
E-mail: dsnell@mail.zynet.co.uk
Tel: (+44/0) 1392 214033
Fax: (+44/0) 1392 496599
Web: www.zynet.co.uk/dsnell
Notes: *You can upgrade from ProCADlite to ProCAD+ for the difference in the current prices. Prices include UK mainland postage. Overseas: No VAT but postage extra please e-mail for postal rates. Cheques payable to: David Snell. Free demo available on Web site.*

Free Ads

• Acorn 586 PC card 133Mhz Includes latest version of PC Pro software for Risc PC's £70. North East, buyer collects or pays postage. e-mail: **andy@beebdevelopments.com**

• StrongARM SA233MHz card for sale £100 ono, Acorn Doom £10, Cyber Chess £10, Dune 2 £7 StuntRacer 2000 £5 (both non-SA), Sound Sampler £10. All must go as I have sold my Acorn. E-mail: **Ben.Penny@BTInternet.com**

• Ovation Pro wanted. Reasonable price paid. **peeb@cableinet.co.uk**

• Acorn Archimedes 4000 good working order with manuals and Ovation, Eureka, Masterfile, CADet and other software. £150 ono 01903 231520

• FOR SALE: MenuBar, superior drop-down menu system from APDL. Just £10 inc. postage. WebFX3D, latest version. Create top-notch 3D text and images. £20 inc. postage or both for £25 inc. postage. **ms@arenaman.com**

• 233Mhz StrongARM Risc PC RISC OS 4.02 15in SVGA Monitor CD-ROM 65 Mb RAM + 1 Mb Video RAM 10Gb HD 56k external modem speakers Software Bundle including Internet Apps. Northumberland. Buyer collects or pays postage. for further details e-mail: **sassy@ashcafe**

• Acorn RISC 700 PC fitted with StrongARM upgrade; Advance Word Processing Package; CD Player; MIDI Outlets; together with Sibelius Student 7 software package. £400.00 ono. Prepared to sell computer and Sibelius separately. Maurice Woods. Tel: 01275 848982

• Acorn User magazines from Sept 1994 to Christmas 1999 complete with cover discs. Also Archimedes World, May 1992 to June 1994 with discs. Best offer secures this 2 foot pile. Tel: Coventry 02476 319519

• Wanted: Network card for SA RPC. Please E-mail me at **ccwilliams@btinternet.com** if you have one going spare for a reasonable price. Chris.

• FOR SALE: Castle Technology 2 slot backplane, less than 4 months old, perfect working order, still got lots of warranty period left. Selling to get second slice which comes with new b/p. Visitors welcome to see it working. £30 Email **ms@arenaman.com** or telephone 0113 246 5303.

• WANTED: A4 laptop, min. spec, cheap and fully working! It's just for writing documents in EasiWriter, nothing fancy. Please contact me with any offers. Email **ms@arenaman.com** or telephone 0113 246 5303.

• A3000, A4000 and A5000's. Have been in use in an independent school. Offered for sale at very reasonable prices. Buyer collects from Shrewsbury. e-mail only to: **d.fry@shr.gdst.net**

• SA233, 24M, 4GHD, 32xCD rom, Castle SCSI i/f, Aleph 586/100 PC card, Eagle M2 video card, Sportster 33.6 FaxModem. All supporting software-PC&Acorn. Serious offers over £600 by e-mail to **pete.dickinson@lineone.net** Gloucestershire.

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Standin

In recent months, RISC OS programming paragon David Pilling has acquired all the rights to his DTP package, *Ovation Pro* (formerly published by BEEBUG Ltd), and re-released it in a new edition on CD. As a long-term serious user, I was approached to write about the package in its updated form.

BEEBUG Ltd, the original publisher of *Ovation Pro*, was also the publisher of *RISC User* magazine (which ceased publication in early 2000 after a twelve-volume life), and I was its Editor from volumes 9 to 11. It was during my editorship that *Ovation Pro* was first launched, and it eventually fell to me to recreate *RISC User* in the new RISC OS package (the magazine having previously been produced in Quark *XPress* on Apple Macs).

RISC User was a B5-sized publication containing a mixture of monochrome and full-colour pages, with lots of illustrations in each issue, so it represented a very good test for the capabilities of *Ovation Pro*; and I'm pleased to say that I was never less than delighted with the software when using it. However, it's true to say that recent improvements in the software would have made my life slightly easier had they been available then. The new fancy fill capability, discussed below, is a case in point; another is the ability to include referenced images within documents, together with low-resolution 'proxy' preview images. This facility would have meant that I could avoid the occasional problems of memory shortage that I used to run into with articles containing lots of photos.

Figure 1 at 63%

FEATURE

Article title goes here

Introductory text goes in this frame, and is not aligned to the baseline grid on the page because its font size is a little larger than the body text. However, its first line is on the same baseline as the main article text.

Note how the use of a baseline grid…

…causes the text to align correctly across columns.

PRODUCT INFO

Anyway, once I had finalised the new *RISC User* layouts in *Ovation Pro*, I ended up with a series of different templates for various kinds of articles. The most common template was used for regular features and reviews, and I'll discuss some of its aspects next.

Initial layouts

Figure I shows the regular article template with the baseline grid made visible. Many people overlook the facilities offered by a baseline grid, but if used with discretion it's a very useful feature which allows you to be certain that your text will align between frames and columns, regardless of how it reflows.

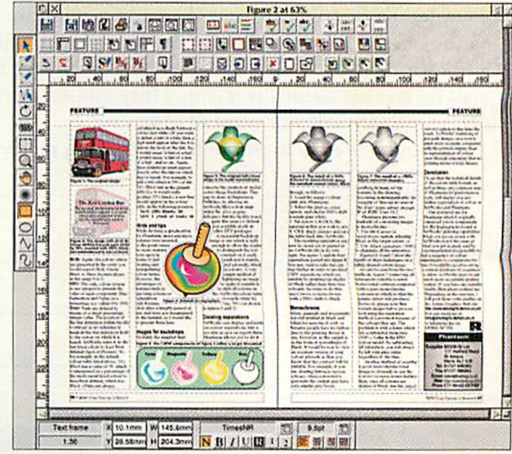
Ovation Pro provides a very useful baseline grid which is entirely separate from the more general object grid, and ruler guidelines, which may be enabled independently. Any text styles may be set to snap to it, and its origin and spacing may be set for each document. For *RISC User*, I set the body text and other related text styles (such as subheadings) to snap to the baseline grid, as well as other styles such as the contents of the product info box.

Just above the main heading in figure I (the text saying 'Article title goes here') you may be able to discern a horizontal dotted line. This is a ruler guideline; it doesn't print, but it allows other objects to be snapped to it. In this *RISC User* template, it's there to allow me to snap the tops of picture frames to the same level as the tops of the letters in the article title and the first line of text on a page.

If it were not present, new frames would snap to the top of the main frame containing the body text, and would appear too high up the page. *Ovation Pro* therefore offers a lot of useful grid options: the baseline grid for the text itself, and an object grid and ruler guidelines for other objects on the page.

In other words, frames and drawn shapes can be snapped to an object grid (rather like the grid in *Draw*), or to horizontal and vertical guidelines that you can place on the page rulers, or even to each other. In combination with some very handy options for aligning objects, and distributing regularly spaced copies of objects horizontally and vertically around a page, *Ovation Pro* provides some really useful and precise layout facilities.

Still looking at Figure I, the main frame containing the body text is in two columns, but this is changed very easily. *Ovation Pro* allows you to set an arbitrary number of columns within a frame (regardless of its shape and orientation), and the gutter between the columns. It also offers a variety of



g ovation

Richard Hallas presents some real examples of this premier DTP package in use

%%+t (50% Black) 50
%%+t 1 (Tint of tint) 50

Hints and tips
While devising a specification for Phantasm, more and more features were invented, to the point where no more avenues were open in terms of just creating and manipulating colour tables. However, the advantages of features such as ignoring colours or separations only became clear after a lengthy period of (using the *Alter graphic* dialogue), but the facility is not quite the same (or indeed not available at all) in other DTP packages.
A successful backdrop image is one which is light enough to allow the reader to distinguish the text overlaid on it easily (such text is usually, and advisedly, black in colour). A very simple method of lightening an image to make it suitable is to shift all colours in the ArtWorks colour table towards white by, say, 70% (as shown in figures 1 and 2).

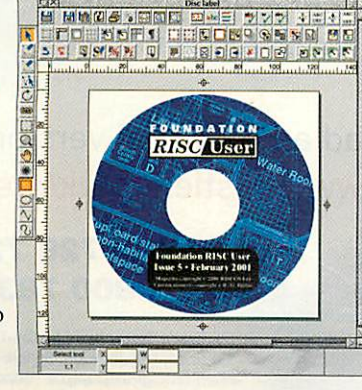
Figure 3: Artwork for separation

flexible drawing tools: you can draw straight lines, Bézier curves, ellipses and rectangles directly onto a page, select join styles and end-caps just as in *Draw*, and even apply a variety of fancy coloured and hatched fills.

Although it is not intended as a drawing package, you can actually use it to produce simple illustrations if you wish; certainly, its facilities are excellent for drawing fairly simple 'page furniture' or annotating illustrations.

Text handling

One of the most important facilities of a DTP package that can also be used as a word processor is its ability to format text in a flexible way. I'll come on to the topic of flowing text around images shortly, but first it's worth pointing out that *Ovation Pro* has some of the best features for handling text of any RISC OS package.



All the normal facilities you'd expect are provided but some of the more unusual features are the ability to include proper drop-caps at the starts of paragraphs, to set text in a particular case (upper, lower or mixed), or even to transform the text (you can stretch, rotate and skew individual letters, for instance).

All text effects can be applied locally or within a named text style. Of particular interest for typographers are the enhanced justification and hyphenation options, which allow you very precise control over the tracking and kerning of your text, and how it will be split between lines.

Ovation Pro can also make intelligent substitutions, such as the proper ligature characters instead of the separate letters for f-i and f-l combinations, and decimal points rather than full stops within numbers. It does not currently deal with 'expert set' ligatures (f-f, f-f-i and f-f-l), though they can be inserted by other means (and you will find them in use in *RISC User*'s pages). All in all, *Ovation Pro* provides the finest level of control of any RISC OS package over the behaviour of text on the page.

Images and frames

That's the basic *RISC User* page template discussed, so let's look at a real article. Figure II shows a double-page spread from *RISC User* issue 11:6; note how it's in three columns as opposed to the more common two-column arrangement of the regular template.

As you can see, the illustrations at the tops of the columns have been snapped to the horizontal guideline mentioned previously, and there's an interesting spinning-top graphic in the middle of the left-hand page which causes the text to flow around it.

Let's take a close look at that spinning top. Figure III shows how the text was made to flow around it in the published article: I have shaped the edges of the frame to fit around the overall shape of the graphic itself, in order to achieve precise control over the text flow.

By tweaking the edges of the frame it was possible to cause individual words to flip between lines and hence determine very precisely how the text would fit on the page. However, if my needs to control the text flow had not been quite so critical, I could have left it to *Ovation Pro* to flow the text around the graphic all by itself.

Figure IV shows the same example again, but this time altered so that the graphic appears in a regular rectangular frame. By using the Text flow dialogue box it's possible to make the text around the graphical contents of a frame rather than the frame itself, with various options concerning which sides of the frame should be taken into account.

In Figure IV I have set the flow to be on both sides of the graphic, with a standoff of 1mm. As you can see, the overall results are pretty similar to Figure III, though the word layout is slightly different on the right-hand side of the graphic and the text hugs the graphic a little too closely at that side. But this ability to flow text automatically around arbitrary graphical shapes is clearly a very impressive and powerful facility.

For really precise control over text flow, a frame actually has three outlines that can be edited independently: the

Show time

Saturday and Sunday, May 19th/20th are the dates for this year's "Wakefield 2001 - The Acorn RISC OS Show" at Thornes Park Athletic Stadium in Wakefield. This will be the sixth show organised by the Wakefield Acorn Computer (User) Group and its hardy band of volunteers.

This year's show will be formally opened by the Mayor of Wakefield at 10 am on the Saturday and the show will then remain open until 5:30pm. Sunday opening times are 10am - 4pm.

The show venue is AA signposted from all the main routes into Wakefield. In addition there are good Rail services to Wakefield from many areas of the country. While car parking is free at the venue. A new feature this year is the provision of a courtesy mini-bus service to and from the main Wakefield Westgate railway station.

As usual, the show will feature a show theatre, Castle's Internet Cafe, R-Comp Interactive's Games Arcade, RiscStation Small Developers Village as well as the very popular Charity stand, which raised over £1600 last year, can you help us improve on that this year. In addition RISC OS Ltd will be announcing the winner of their Demo competition. Clares Micro Supplies are also announcing the winner of their WimpBasic programming competition at Wakefield.

Despite the consolidation of the RISC OS market over the past twelve months, we will still have a lot for visitors to look forward too and possibly even have a few surprise announcements at the show.

We are pleased to be able to welcome a number of small companies who have never been to the Wakefield before. Companies like Co-Comp with their e-commerce software, Soft Rock Software with *Webchange*, Clic with their *Textease* educational resources, Fleur Designs with their intriguing game boards, Kudlian Software selling their compilation CD among other things and Design IT with Network cards, and so on.

Other things to see will be the Omega working and on sale on the MicroDigital stand, in addition ExpLAN will have their new solar powered 'Solo' computer! If this is even half as successful as the 'wind up radio' was in Africa it could open up some interesting possibilities in the market. We are also told the final release version of *Vantage* from Cerilica will be available. Other companies will no doubt have there own little surprises in store.

It is hoped to be able to have a few people showing *Ovation Pro* in action on the Wakefield User Group's stand, although this is dependent on enough volunteers being found in time to man the feature.

So if you can, why not join us at the premier RISC OS computer show. For more details on the show attractions or how to get there, take a look at the show web site **www.wacg.org.uk/show**

Ticket prices on the door will be: £4.00 for Adults and £2.50 for Foundation members (on production of membership card), OAP's and Juniors. The lower rate of £2.50 also applies on the Sunday to WACG and ARM Club members on production of membership card. Under 6's free.

Advanced tickets are £1.50 for Juniors (age 6-16) or £2.50 for all others.

These can be obtained by sending a cheque or postal order payable to "WACG Show", (Closing date for advance tickets is 12th May) to:

WACG Show
95 Cumbrian Way
Wakefield
West Yorkshire
WF2 8JT

Show Theatre Programme 2001

Saturday

Time	Speaker	Title
10.30 — 11.25	Castle Technology	'The latest from Castle'
11.35 — 12.30	Cerilica	'Cerilica Design Software'
12.40 — 13.10	Brian Jaques	'Web Writing from scratch (but with a CD)'
13.20 — 14.15	RiscStation	'RISCOS Computing, On The Move'
14.25 — 15.10	Chris Gilbert	'NetBSD'
15.20 — 16.15	(tbc)	

Sunday

Time	Speaker	Title
10.30 — 11.20	Cerilica	'Cerilica Design Software'
11.30 — 12.20	Castle Technology	'The latest from Castle'
12.30 — 13.00	Brian Jaques	'Web Writing from scratch (but with a CD)'
13.10 — 14.00	RiscStation	'RISCOS Computing — On The Move'
14.10 — 14.50	Chris Gilbert	'NetBSD'
15.00 — 15.50	(tbc)	

Railway rumbles

As everyone knows, *the rail* network has been in a state of change and confusion ever since October. In many parts of the Country things are

Mini Guide to Show

Please note this is not a complete list of exhibitors.

Akalat Publishing

At this year's Wakefield Show we will be celebrating the 40th issue of Acorn Publisher with a special bumper issue which will be on sale at the show. This issue also contains part two of our new tutorial series on using Photodesk plus many other informative and instructive features. Look out for special offers for new subscribers and on back issues. We will also have an extensive range of relevant books on sale.

APDL

As well as their usual range of hard drives, CD writers and low cost CDs and other software this will be the first major event where the new APDL/ProAction range of software will be available. This includes Sleuth, RiscCAD, EasyC++, Masterfile, Typestudio and many more titles.

Archive Publications

Archive Magazine the subscription magazine for RISCOS users (33 for 12 issues). Huge amounts of information, articles, news, views, etc. Also on sale, the Archive CD (19) with 10 years worth of back issues in HTML format, with search programs to help you find that vital piece of information. Also on the CD are the monthly discs, utility programs, PD and other useful information.

The ARM Club

We are the leading independent user group and will be having special deals on membership. We will also be selling the New DiscKnight RISC OS 4 disc recovery program as well as StrongGuard.

BBC PD and Shareware Library

Come and see how it used to be be and find some software for your old beeb and Masters, etc..

Brian Jaques

Basic HTML on CD: A thorough coverage of basic HTML coding for those who want to write their own pages the proper way. Explanations, illustrations, demos, exercises, projects, utilities, tag reference, keyword/phrase indexes. Archmag section, based on Archive articles + Main course (all HTML elements in depth) + FirstGo intro to HTML : text, images, links, & four page project.

Castle Technology Ltd

Castle will be showing their new exciting products for the RISC OS (Acorn) platform. The Kinetic Risc PC features SD-RAM, and is therefore up to 4x faster than a standard StrongARM Risc PC. With virtually full compatibility for all current software, the Kinetic Risc PC leads the way forward for ultra fast, reliable RISC computing.

A new version of Oregano will be demonstrated at the exhibition. This unique fast, fully featured Web browser for the RISC OS platform is compatible with all RISC computers running RISC OS 3.5 and above. Oregano supports the widest range of WWW features, it is also fast and easy to use.

Cerilica Limited

Cerilica will at long last be exhibiting and selling Cerilica Vantage — RISC OS' latest vector design and publishing 'killer app'. Over the extended period of development it has gained more sophisticated features and allows for the creation of stunning works of art. Other software products available include the recently released Cerilica TopModel, the ever-popular RiScript as well as the essential Publishing Pack.

Clares Micro Supplies Ltd

Clares will be demonstrating their full range of software, including Compo (with Composcript), Schema 2 and Rhapsody 4. We will also be selling our range of hardware upgrades, including the Samsung ML-4600 laser printer and the Epson Stylus 880 inkjet. We now have even faster CDRW drives at even lower prices, and our internet connection packs are cheaper than ever.

Clic

Clic produces a nine pack collection of support screens for My World covering all the major topics outlined in the National Curriculum for Science — 227 different activities in all for ages 5 to 11!

Cumana

Following their last successful twelve months, Cumana / Cannon Computing will once again be showing off their networking and multi platform capabilities. Any school interested in running a PC environment across their new and old RISC OS machines must visit the stand. As a Citrix Silver Reseller and Partner they will be showing the latest in Citrix developments plus the eagerly awaited Topcat2 software.

ExpLAN Computers Ltd

Come and see the new solar powered 'Solo' computer in action. Printers are another of ExpLAN's specialities, as is the Holy Bible software.

Fleur Designs

You may remember Fleur Designs from a look at the company in last November's Acorn User. Fleur Designs use a range of RISC OS machines to produce the board designs for their designer Board Games. The company produces a range of original compact board games and are hoping that you might purchase one or two to keep your family happily busy while you play with all the new hardware and software that you'll purchase at Wakefield.

Fortran Friends

We shall demonstrate desktop compilation and running of Fortran programs using extensive libraries. We offer support for Fortran programmers on RISC OS computers and porting of Fortran applications, such as PGPLOT or ORTEP.

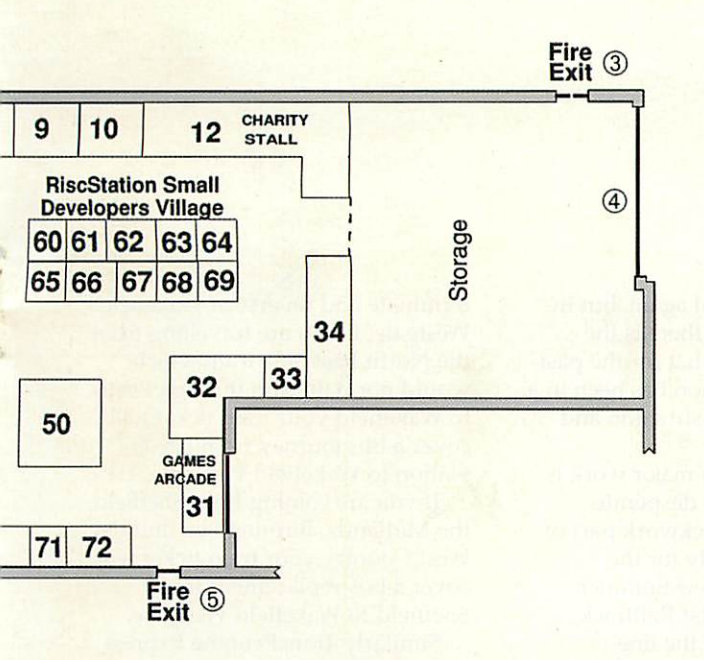
See polyhedra in 2/3D and in stereo with the latest versions of our Fortran applications: Stellate, PolyNet and PolyDraw. Learn how to use them for all levels of education or just for fun. Other computing hobbies include bellringing and family history.

Icon Technology Limited

Icon Technology will be showing their award winning word processors EasiWriter and TechWriter that have the ability to read and write *Microsoft* Word documents as well as reading and writing RTF and HTML.

iSV Products

iSV Products will be showing their award-winning range of software including DrawWorks New Millennium, perhaps with a few enhancements, you will have to pop along to our stand to find out.



Exhibitor stand list *(subject to change)*

50	Acorn User
6	Akalat Publishing
40	APDL
20	Archive Publications
2	The ARM Club
30	A.A.U.G.
1	Castle Technology
55	Cerilica Ltd
12	Charity Stall
34	CJE Micros
46	Clares Micro Supplies
22	Clic Educational Software
33	Co-Comp Ltd
7	CTA Direct
42	Cumana
26	Davyn Computer Services
68	Design IT
24	Desktop Projects Ltd
63	Jonathan Duddington
51	Electronic Font Foundry
72	ExpLAN Computers Ltd
65	Fleur Designs
41	Fortran Friends
34	The Fourth Dimension
45	Icon Technology Ltd
44	iSV Products
29	Brian Jaques
47	Kudlian Software
3	Microdigital Ltd
60	Chris Morison Software
71	M W Software
10	NetBSD
66	Paradise
8	Photodesk Ltd
9	PHR Computers
32	R-Comp
32	R-Comp Interactive
31	R-Comp Interactive Games Arcade
4	Real Ingenuity Ltd
62	Really Good Software Co
52	Reflex Electronics
49	RiscStation Ltd
64	Serious Statistical Software
43	Softease Ltd
67	Soft Rock Software
21	Sound Venture
25	Stuart Tyrrell Developments
48	Surftec Ltd
61	Paul Vigay Software
5	Wakefield Acorn Computer Group
23	Warm Silence Software Ltd

Kudlian Soft

Kudlian Soft will be offering their CD Software bundle containing all of their recently reviewed and highly acclaimed software titles, Banner II, Calendar, Splosh+, DataSweet and so on at a special show price.

We will also have many Acorn spares and components at very competitive prices, including complete machines, PC cards, scsi cards, network cards, internal modems...

Microdigital Ltd

MicroDigital will be showing the new fully featured 26/32 bit Omega computer range, this state of the art dual processor design, is fully RISC OS 4 compatible and runs all existing StrongARM software, come and see the future of RISC computing.

Chris Morison/Organizer

Organizer is a desktop personal organiser, including an Address-book, Diary with full alarm system, Anniversaries, Notebook and a Calendar. First released in 1997 Organizer has gradually gained power without losing it's very intuitive interface.

It will eventually synchronise with most Psion handhelds, and this new version may be available or at least being demonstrated at the Organizer stall.

M W Software

MW Software will show their ever-expanding range of ArtWorks add-ons, most recently joined by the JPEGObject and TextArea modules. You can also find out about the latest ArtWorks bug fixes and enhancements.

NetBSD

NetBSD is a free, highly portable UNIX-like operating system available for many platforms, including the ARM range of CPU's. Its clean design and advanced features make it excellent in both production and research environments, and it is user-supported with complete source. Many applications are easily available.

CD's of the latest stable NetBSD/arm32 release are available for purchase.

Paradise

Paradise will be showing their two current budget games, Overload and Inferno, along with previews of their next title "Toybox Dreams". Paradise's Joypad interfaces will also be on sale, showing support for vibration feedback, dual interfaces and steering wheels. New for Wakefield are Paradise's graphics tablets, including budget tablets built in to soft-touch keyboards. There may also be other surprises in store — you'll have to visit the stand to find out!

Photodesk Ltd

Photodesk are showing their range of studio quality graphics software for RISC OS including Photodesk Olympic. Accessory and tutorial CD-ROMs from David Cowell will be shown. The latest range of digital cameras including the new Olympus miniature camera will be introduced. New Photoreal drivers for the latest Canon photo printers will be on sale. Latest developments to OHP will be previewed. Some attractive show discounts are offered.

PHR Computers

We will be showing the brilliant new MicroDigital Omega and will taking orders for delivery as soon as possible after the show. We will also have second user Risc PCs available at affordable prices. If you need to feed your inkjet printer we have a good range of photo quality papers as well as T-shirt transfer paper, real canvas and CD labels, with cartridges and refill kits to suit most printers.

R-Comp

Come and see the latest versions of R-Comp's Internet products including the brand new Messenger Pro 2, exciting new WebsterXL developments and the latest DialUp enhancements. The latest release of HTMLEdit Studio will be on show and available, supporting the most recent HTML 4.01 specs, plus familiar favourites like EasyClip2, AddressIt and more.

R-Comp Interactive

R-Comp Interactive will be demonstrating at least one exciting new game, as well as sponsoring the show through the games arcade. In addition, R-Comp Interactive caters for the more serious minded with products such as network printer drivers,network printer sharing boxes etc. RCI's range of music products such as the Anthem sequencer and various MIDI solutions will also be available for demonstration and purchase!

Real Ingenuity Ltd

Showcasing the Internet services provided by r[i]. From World Class Web design to superior Web hosting and dial-up access. As the Midlands RISC OS dealer, r[i] will of course be offering various items of hardware and software for sale.

Reflex Electronics Ltd

Reflex Electronics is your premier service centre for Acorn computers. For machine or monitor repairs, or our popular part exchange repair scheme for power supplies, motherboards or A4 batteries. For Risc PC 'timing problems' or technical support on anything Acorn related.

See our stand for more information, visit our Web site at www.reflexelectronics.co.uk or call 01438 311299 and ask to be put through to one of the technical support staff.

The Really Good Software Co

RGSC's Noticeboard Professional is now on version 1.61 and getting better all the time. Check it out! Picture Book 2 is as popular as ever. These six great programs are ideal for pre-school and primary school children. Then there's the handy Notes utility, only £5 at the show. For the brainy and the brave there's Montage the creative fractal art program. Look out for the special show prices.

Softease Ltd

Softease will be featuring Textease *Studio, an* essential selection of ICT tools designed specifically to simplify teaching of the curriculum in schools. This is comprised of Textease 2000, the award

winning word-processing and DTP package; Textease Primary; Textease Spreadsheet, a powerful numeracy tool and Textease Database, which can be used to store pictures and sound as well as numbers. New Modern Foreign Language Packs are also now available.

Soft Rock Software

Soft Rock Software will be demonstrating the new version of WebChange, which now features a script language - example scripts will include one to convert PipeDream files to HTML.

Serious Statistical Software

Come and be amazed by our unique statistical/graphics packages. However, don't try to do the same things at home with your spreadsheet! There'll be very special Show Prices too.

Surftec Ltd

Surftec will be demonstrating its latest range of CompactFlash and SmartMedia readers allowing RISC OS machines to access data saved from Digital Cameras, MP3 music players and so on. Plus we will be demonstrating the Precedence range of RISC OS thin-client solutions and the NetManager server solution for schools and business.

Remember to visit early as we are planning to sell a quantity of ex-demo stock and spare parts at special show prices, including ARM 700 processors, 2 and 4 slot backplanes, Risc PC slices, memory, educational software plus much more.

Paul Vigay Software

Paul Vigay has been supporting the Acorn scene since the Atom days and will be demonstrating the latest versions of his software, including AntUtils and Disc Commander. His most recent enterprise has been to take over ANT Technical Support, so come along for a friendly chat.

Wakefield Acorn Computer Group

Wakefield Acorn Computer Group was formed in 1983 and is one of the longest running local RISC OS user groups in the UK.Over the years, our members have enjoyed a wide variety of talks,demonstrations and training sessions which have included well known guestsfrom the Acorn / RISC OS arena.

Many new hardware / software products havebeen seen prior to their official launch date! Membership costs just £10 per year, with non-members paying an entry fee of £1.50 per meeting. We have our own PD disc library, an e-mail discussion forum, members area on the Web site, monthly newsletter and discounts withsome Acorn / RISC OS suppliers.Please come along to stand 5 and see what the WACG can do for you.

Warm *Silence* Software Ltd

Warm Silence Software will be showing the latest versions of its wide range of essential software. This year the focus is on getting the best from the 'Net with LoadMaster, and the SVG and Sound plug-ins.

nearly back to normal again, but in West Yorkshire there there is the added complication that for the past two years Leeds Station has been in a process of total reconstruction and expansion.

Unfortunately this major work is running late and in a desperate attempt to get the trackwork part of the modification ready for the introduction of the new Summer timetables on May 21st Railtrack have announced that the line connecting Wakefield Westgate station with Leeds will be closed on Sundays up to and including May 20th.

Even worse, they have stated that they may have to close the line on Saturday 19th May as well. So how does this affect visitors coming to the show by train?

If you are travelling from London and points North on the East Coast main line, which includes connections from Lincolnshire and East Anglia there is no problem as trains heading for Leeds will terminate and reverse at Wakefield Westgate. If you are travelling from the North East on a train which would normally run through Leeds to Wakefield your train ticket will cover a bus journey from Leeds Station to Wakefield Westgate.

If you are coming from Sheffield, the Midlands, Birmingham and the West Country your train ticket will cover a bus replacement from Sheffield to Wakefield Westgate.

Similarly TransPennine Express passengers from Liverpool and Manchester will probably be bussed from Huddersfield to Wakefield.

How do you find out exactly how you will be affected? Look at the West Yorkshire Metro Transport website at:

www.metro-wyorks.co.uk

Or telephone Metro on 0113-245-7676 between 08:00 and 19:00 Mondays to Saturdays and between 09:00 and 17:30 on Sundays. You will be able to get up to date information on your own specific journey requirements. END

How to get there

Casio QV3000EX/Ir Special Offer



Everything you need to get started; camera, card reader with RISC OS drivers, two sets of high capacity rechargeable batteries and charger all for just £499!

Need a new Mouse?

Wheel Mouse Optical
An optical mouse for precise tracking in a comfortable, rounded shape.
RiscPC version: £49.99

MouseMan Optical
Smooth, precise, accurate performance in a sleek, contoured shape.
RiscPC version: £49.99

Mini Wheel Mouse
A cute, compact and convenient wheel mouse in a silver casing.
RiscPC version: £39.99

Pilot Mouse
The good value, reliable wheel mouse for greater efficiency.
RiscPC version: £26.99

Cordless Wheel Mouse
Cordless for freedom of use, a scroll wheel and a shape that fits right or left hand.
RiscPC version: £39.99

Cordless MouseMan
Freedom from cables, curvaceous, easy scrolling: the best nibbler around!
RiscPC version: £54.99

Low cost RISC PC PS2 compatibility thanks to new STD PS2 converter lead.





CompactFlash™ & SmartMedia™ for RISC OS!

Surftec are pleased to announce the launch of our range of DigiFlash CompactFlash™ and SmartMedia™ card readers.

Compatible with all makes of RISC OS computers* and Network Computer, they are easily plugged into the parallel port which allows you to download data from CompactFlash type 1 and 2, and SmartMedia cards, from devices such as Digital Cameras, PDAs, MPEG3 Portable Music Players etc.

Now with support for IBM MicroDrive!

DigiFlash now supports the IBM MicroDrive, either in native FAT16 or even partitioned for RISC OS (including F+ support).

Once the reader has been plugged into the parallel port and PS2 keyboard port (for power), you simply load the RISC OS driver. This device allows other parallel devices to be daisy-chained, such as printers.

When the software has been loaded, just treat the media like a floppy disc, you can copy, delete and rename files while on the CompactFlash or SmartMedia cards.

The Surftec RISC OS drivers provide an extra disc icon allowing the contents of the media to be read and loaded into your favourite Acorn photo software such as ImageMaster, ChangeFSI or PhotoDesk (also available from Surftec).

Card Readers/Drivers/Media

CompactFlash Reader (inc Acorn driver)		£ 79
SmartMedia** Reader (inc Acorn driver)		£ 79
Acorn RISC OS/NC Driver*		£ 39
340MB IBM MicroDrive	**NEW PRICE**	**£ 219**
1GB IBM MicroDrive	**NEW PRICE**	**£ 319**

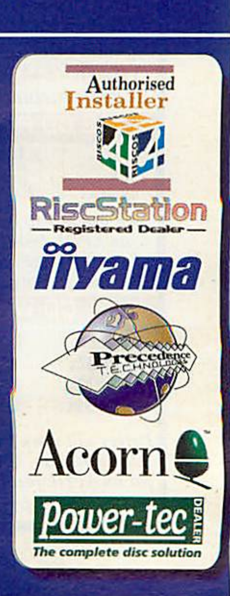
* Surftec driver will not work with all types of card reader, and requires a bi-directional parallel port.
** SmartMedia reader expected launch May 2001.

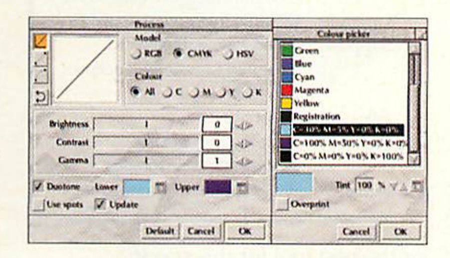
Surftec
Internet Computer Solutions

Surftec Ltd
Burma Cottage
Glen Road
Beacon Hill
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frame shape itself, and two text repel shapes (which are initially the same shape as the frame), to repel text inside and outside the frame.

It's rarely necessary to exert this level of control over text flow, and you can ignore the facility if you don't need it, but it's there if you do and it's extremely powerful; it means that the text flow both inside and outside a frame can be entirely independent of the shape of the actual frame.

Once your frames are on the page you can then rotate and skew them freely, change their shape and number of columns (if they contain text), and switch them between text and graphics without any trouble. Frames can be of any shape, and a freeware extension applet (provided on the CD) even allows you to import complex shapes from drawfiles and turn them into frames, too.

Moving away from *RISC User* to its successor, *Foundation RISC User* (the CD-ROM magazine that I currently edit for RISCOS Ltd), Figure V shows the CD label from issue five of the magazine. This is printed in three spot colours on a white background, and it's worth noting that the 'Foundation' and 'RISC User' logos are actually single frames, filled with solid white and black; they're not actually graphics at all.

As for the rounded-rectangle frame containing the issue details, that was produced very simply by drawing a rectangular frame and then setting its corner radius to the desired value. The circular CD label is of course a circular frame, as is the 'hole' in the centre, and the graphic in the background is a full-colour ArtWorks file which has been tinted between two spot colours to give the impression of a blueprint.

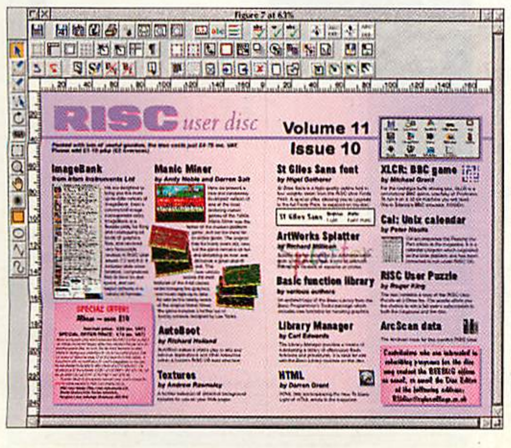
Colour handling

That brings us neatly on to the topic of colour handling. *Ovation Pro* contains a very powerful colour supplement that allows you to define arbitrary colours in your documents and use them in a variety of ways. Various preset colour charts are provided, and *Ovation Pro* can make a good attempt at simulating the colours of the final output on the screen (because, as we all know, colours chosen on the screen can look very different when they appear in print).

Colours can be assigned to text and graphics, and both bitmap- and vector-based graphics can be image-processed in the same way. Figure VI shows *Ovation Pro*'s image processing dialogue box for the image on the CD label in Figure V, and the colour picker window.

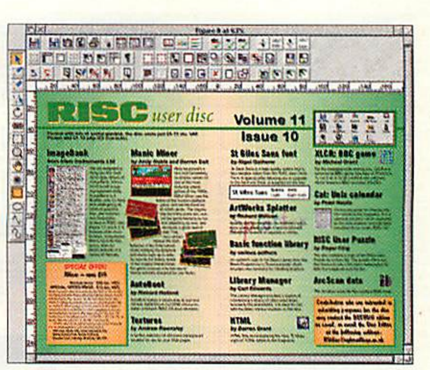
I have set the Duotone option for this image, which causes it to be rendered in shades between two specified colours, and I have chosen to name my three spot colours from their CMYK values. I could have called them Tom, Dick and Harry had I wanted to, but the colour names are printed on the spot colour plates when outputting separations, so using CMYK values provides a useful reference for the printers.

Colours can be changed at any time, and your document will update instantly to reflect the changes. Going back to *RISC User* magazine, each issue used to make widespread use of a pair of colours, which would be relatively arbitrary but different each month.



Certain pages (in particular, the spread devoted to the monthly floppy disc) made heavy use of these colours, so it was a real boon to be able to just edit the colours and have the entire contents of the page update instantly.

Figure VII shows the disc pages from *RISC User* 11:10 in their original colours, while Figure VIII shows how different the



pages can be made to look simply by changing their custom colours. The colour supplement also provides other powerful options, such as the ability to set halftone screen angles for individual images and to view and print colour separations.

Fancy fills

One of the more recent additions is the Fill facility. This is one feature that I wish I'd had when I was working on *RISC User*. You will see, in Figures VII and VIII, that the disc pages used a graduated fill in the background; other pages in the magazine also used similar fills in a less dominant way (Figure IX shows the Contents pages from issue 11:8, which use several banded fills in various colours).

In all these cases, the fills were created in ArtWorks and imported into their own frames, but these days I could achieve the same effect in a much easier and more powerful way by using the Fill applet. This powerful extension allows any frame or other drawn object to be filled in lots of ways.

You can use graduated fills (in one, two or four directions), radial fills, hatching of various types and even user-defined repeating patterns and simulated halftones. Large numbers of options can be set for each fill, and the colours are definable based on those in your document; you can even spread a single fill over multiple objects.

A further kind of fill, which is unrelated to the Fill applet, is the image tile: *Ovation Pro* can fill a graphic frame with tiled copies of a graphic in the same way that a Web browser tiles an image across its window to produce a page background (though with more options). An example of this can be seen in the RISCOS Ltd advert, which you can find elsewhere in this issue of *Acorn User*. The advert is to a large extent constructed out of 'pieces', which *Ovation Pro* tiles within graphic frames to construct an overall image. The

various components are shown in Figure X; turn to the real advert to see how they all fit together!

Applets and extensions

Both the colour supplement and the fancy fill facility are actually extensions to the core program which take the form of applets. *Ovation Pro* comes supplied with a very wide range of applets, both original and third party, to provide a very wide range of extra facilities ranging from the serious (such as the applet to support imposition printing) to the fun (one applet even plays *Minesweeper*).

If you have some programming ability, then full documentation is supplied to allow you to write your own new extensions, and useful third party applets continue to appear fairly regularly.

Even if you're not a programmer, it's still possible to customise the program in many ways. You can create your own macros and edit the button bar, for instance. The screenshots in this article show my personal three-row button bar, which I defined to include the facilities that I find most useful; by default, though, it comes with a single-row bar. *Ovation Pro*'s flexibility of interface and ability to be extended with new features makes it a uniquely powerful package on the RISC OS platform.

The CD release

Bought in its new format on CD, *Ovation Pro* comes with all available third party extensions such as applets, file translators, template documents and other resources, and represents fantastic value.

A recent addition to the program is the Fill applet, described above, and another important new addition to the CD release is the Impression document loader, the existence of which means that Ovation Pro can now make an attempt at loading a very wide range of Impression documents. There is also a new manual now that has been long-awaited.

A word of caution does need to be sounded here, though. The *Impression* loader is an impressive achievement in itself (not least because no documentation on *Impression*'s file format is available), and *Ovation Pro* makes a commendable job of interpreting what it can from Impression documents.

But the fact remains that *Impression* and *Ovation Pro* are two very different packages, and it is not reasonable to expect absolutely perfect translation from one to the other. So you should not expect absolutely identical results when viewing an *Impression* document in *Ovation Pro*; you won't get it.

What you will get is a readable document which can then be edited further and 'modernised' for the new package. Viewed in those terms, the *Impression* loader is powerful and useful, but it should be considered as providing a useful starting point for further editing rather than a flawless conversion.

Conclusions

I hope that this look at using *Ovation Pro* for real projects has proved interesting. Despite this being a fairly long article, I have only scratched the surface of what it can do, and there are important areas which I've barely touched on at all (printing, for instance; and Ovation Pro has the most comprehensive range of printing options of any package I've used).

But the important conclusion is that this is simply a superb piece of software, and one of the very best packages available for RISC OS. I have always maintained that RISC OS is a particularly excellent platform for DTP work, and *Ovation Pro* is by far the best tool for this specific purpose.

If you've been holding off buying it because you're used to *Impression*, then wait no longer; it is different to *Impression*, but it's an easy package to learn, with a friendly interface, and its new *Impression* loader means that you can now translate your old documents with only a relatively minor amount of work.

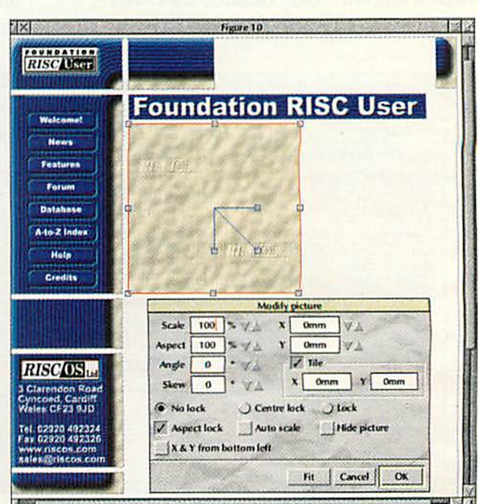
And if you have the pre-CD version you should certainly upgrade to the CD release. As well as the new facilities of the program itself, the CD is packed with useful extra resources.

I personally have a number of computer platforms at my disposal, and a range of modern DTP packages to run on them, but *Ovation Pro* is the DTP software that I always use by choice, unless there's a very pressing requirement for me to use something else. It's powerful and flexible and, combined with the advantages of RISC OS, simply works better than anything else. I can give it no higher recommendation than that.

Richard Hallas is an award-winning former Editor of RISC User magazine. He currently edits Foundation RISC User, the quarterly CD-ROM-based magazine published by RISCOS Ltd for members of the RISC OS Foundation, an online sampler edition of which can be viewed at **http://foundation.riscos.com/fru.htm** END

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Soul of

Windows. Mention the word to a lay person in the context of computers and they'll have in their mind the product from Microsoft. Quite the coup for a company that was 10 years late to the windowing game and made such a thorough balls-up of their implementation that it's probably cost businesses worldwide billions of dollars in lost productivity.

But I'm getting ahead of myself; the Microsoft bashing, as I'm sure you've come to expect, will be a highlight of this month's tournament. If it's not a Microsoft product though, what exactly is a window, what makes a good one, and which OS has the best?

The heart

If the eyes are the windows into the soul, windows are at the heart and soul of modern day GUIs. The window implementation of RISC OS is also, in this writers opinion, the very heart of what makes RISC OS so great. So listen up.

Before GUIs we had Command Line Interfaces. You write in a command to enter a mode and once in that mode you can enter new commands specific to that mode. This is the same as loading a word processor, for instance, then being able write a letter. But with this system you can't decide, mid-letter, to open your address book held in a database. You must first leave the wordprocessor mode to get back to the initial mode where you can send the command to enter the database mode.

The primary reason for migrating to a window-based GUI system is to allow a (pseudo) modeless way of interacting with the computer. Instead of having to save your letter and close the word processor, the letter can be left where it is while the new database mode is loaded on top of it. This sort of thing could be achieved without windows per se — you could have both modes (three if you count the initial mode) taking up the whole screen with a special key to switch between them.

Organising the data relating to each mode in specially defined areas of the screen ('windows') allows both sets of data to be viewed at once. That's the secondary reason for migration to window GUIs. The third reason is an extension of the previous one. Windows allow the user to make best use of screen real-estate, giving more space to more important modes as you see fit.

Good windows, then, are easy to define. Most importantly they should allow the user to (apparently) work in multiple modes at the same time, in other words, use lots of different applications (or lots of instances of the same application) simultaneously. The more advanced the windowing system, the less obvious it is to the user that modes are being selected between. The user shouldn't have to carry out some distinct switching operation to go from writing the letter to sorting through the address database.

As for the next critical window feature, it's pretty simple. You should be able to see the contents of different windows simultaneously.

Finally, the better the windows, the easier it is to manipulate them in order to maximise the display of their contents relative to the constraints of the screen. I'm sure by now I don't need to tell you that 'easier' here can be interpreted in terms of our friends targeting, ease of use and consistency. There is one relevant subtlety of interface design that I haven't really touched on yet though, so we'll take a breather before the tournament and talk about games.

Neverwinter

Being a huge fan of the developer Bioware's series of PC computer games, I've been avidly following the two year gestation of their next great project, Neverwinter Nights. Key members of the development team frequently discuss the interface for what is a deeply complex game.

In among the solid gold these guys come up with, however, is their assertion that the more ways there are to carry out a certain task, the better the interface. They seem proud of the fact that there are four ways to do just about anything, brushing aside possible interface problems with comments to the effect 'well there'll be another way to do it, so it doesn't matter'. But is more really better?

The initial argument is to provide users of various competency the best interface for them — simple, pretty pictures for the new players through to keyboard shortcuts for the hardcore player. The Bioware line also seems to be that different players will have different preferences for ways to do things, so it's 'obviously' good to cater for them.

But no, more is not really better. Not by a long shot. The only time you need an alternative way of doing something in a UI is when the primary method is poorly designed. Keyboard shortcuts for hardcore players? A strange concept, given the mouse is faster than the keyboard (take a stopwatch to it).

This idea is undoubtedly a throwover from Windows users where the mouse/window interface is so bad it can sometimes (seem to) be quicker to use the keyboard.

Player preference? All players would 'prefer' to use a single, consistent, *well-designed interface*. When Bioware discovers that it's a little too hard to carry out a certain action the normal way, they know it's still easy using the secondary method. But players *will* play the normal way and either hate doing this certain action or, if they discover the secondary method, have to learn to use this bizarre new method just for that action.

Can you say inconsistency? So more ways to do things is merely a

the GUI

Sendu Bala explores the window to the application

cop-out for the developer; instead of fine tuning the way the interface works they add in inconsistent fixes to their problems.

All of that said to conclude that the fewer the ways there are to carry out the various window manipulations possible, the better.

Round Three

Ready? After last month's round at the restaurant, Bill Gates won't return my phone calls, and Steve Jobs hasn't forgiven my MacOS X snub. Nonetheless, will Bill's Win95 catch up with the pack, or will bookies favourite MacOS pull into the lead? What about RISC OS? Let's find out in this month's metaphor-free analysis of the best and the worst of windowing.

All three OSs allow you to keep multiple applications and files loaded at the same time. They vary in the way you switch between them. Win95 and MacOS both, in the most part, have distinct switching between applications. To edit a file belonging to an application you must first bring that application to the front.

For Win95 this is because files are usually 'child' windows of the application window — you can't deal with the children until you've dealt with the parent. For MacOS, clicking on one window of an application will usually bring all windows belonging to that application to the front. Some recent applications for both operating systems allow each window to act independently, so you need only bring a particular file window to the front to edit it.

An evolutionary step ahead, RISC OS requires no obvious change of the environment to start editing in a different window. There is no noticeable switch; the user just starts editing a *file* as long as it can be seen on the screen somewhere. Zero points to the more primitive operating systems, one to RISC OS.

Win95 manages to get the next bit right though — two application windows next to each other will show the contents of each, as with RISC OS. In a shock turn for the worse however, MacOS fails this basic need. Windows 'not in use' because they aren't in front do their best to disappear to reduce 'clutter'. What it reduces is one of the reasons for having windows in the first place. So for the first time MacOS doesn't get a point where Windows does.

Now the question of manipulation. It's all very well not needing to switch in RISC OS if you can see the window you need, but how realistic is that? And how realistic is it to have two windows side by side in Win95 in order to read from them both? Is MacOS's failing so bad after all?

Win95 and MacOS share a simplistic window manipulation model. You can make the window tiny (so you can read only it's title and none of the contents), make it fill the screen (so you see as much content as possible), make it an intermediate size from where you can manually resize the window, move the window and finally close the window.

To resize a window you must target the few thin pixels around the edge of a window, having first brought the window to the front and made it the intermediate size. It's actually an incredibly awkward thing to do, especially compared to clicking the 'maximise/minimise' button, so most users work with full-size windows most of the time, using the taskbar or menubar to switch between applications and windows.

So no, it's not likely for the Win95 user to be looking at the contents of two applications at the same time and MacOS no longer looks so bad. Until we bring RISC OS into the equation that is. RISC OS has the unique ability to make windows an appropriate size (display as much as the content as possible) without filling the screen, all in the click of a single button. The RISC OS version of 'maximise' makes windows as tall and wide as the content inside them. I'm writing this in a maximised Microsoft *Word* window where fully one quarter of the screen is unused space even though the view magnification is 100%.

With RISC OS the window would simply be three quarters as wide as the Word window, with the resulting space letting me see windows of other applications behind. Resizing of RISC OS windows is also trivial — you click drag a large (compared to a window edge) target button without having to first bring the window to the front or alter the 'maximisation' state. RISC OS has the only GUI that lets the user freely and easily view and edit data in different windows and applications without needing to stop and switch between, then manipulate the windows. RISC OS gets a point.

With space short, I'll end round 3 with some fun (yay!) homework (boo!) for the reader. Remember what I was saying about less is best? There is one way of closing a RISC OS window. Excellent. There are three ways of closing a MacOS window. Pretty good. There are over twenty different ways to close a Win95 window.

See how many of these you can figure out before next month, when we shall see if Win95 and MacOS on 2 points each can hope to close the gap with RISC OS on 5. END



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Exercise in speed

Pete Everett goes into MP3

A drawback with many Acorn computers is the lack of a floating point coprocessor. For most applications this is not a great problem but in signal processing, involving filters and transforms it can make a big difference. Audio compression programs are a good example of this.

An MP3 encoder running on a very modest PC can execute at speeds approaching real time, by which I mean that sound file that takes 1 minute to play takes 1 minute to encode. The same file encoded on a Risc PC can take over an hour which is not very practical, and it's all down to an awful lot of floating point calculations.

It is possible to convert the code so that it uses integer arithmetic instead of floating point, but it is not as easy as simply changing data types from 'double' to 'int'. Before doing this, an analysis of the number ranges and accuracy or resolution must be done to ensure that the values can be adequately represented by an integer.

Range and accuracy

If a floating point number can have a range from 0.01 to 0.1, converting it to an integer will give 0. The floating point number must be scaled before conversion. Let's multiply by 100. The range is now from 1 to 10 which can be represented perfectly. If the floating point number range was from 0.012345 to 0.1 we would have *to multiply by 1000000* to give an integer range between 12345 and 100000.

If the integer has enough bits to hold both numbers then it will work. Another point to bear in mind is that when numbers are manipulated the result will have a different range. For example, if two 16-bit numbers are added, the result will be a 17-bit number. If two 8-bit numbers are multiplied, the result will be a 15-bit number.

Fractions

It is sometimes advantageous to represent a number as a fixed point fraction. A signed fraction is a number between -1 and +1. When you multiply two fractions, the result is also between -1 and +1. The bulk of signal processing is multiplication so using fractional arithmetic ensures that the variables don't become impossibly large.

Fractions are really just a different way to interpret the number. A signed integer is a whole number, the decimal point, or binary point in a microprocessor, is to the right of bit 0. In a signed fraction, it is between bits 31 and 30, in both cases bit 31 is the sign.

```
 bit:    31     . . .    2 1 0      31 30 29   . . .    0
value:   S               4 2 1.      S. 1/2 1/4
            Signed Integer          Signed Fractional Integer
```

In all cases, the processor knows no difference, it bumbles along, adding and subtracting. It is how we interpret the number that makes the difference.

Multipliers

The representation of integer and fractional numbers is the same when the numbers are added or subtracted but is different if the numbers are multiplied or divided. When two numbers of N bits each are multiplied, the result is a number with 2N-1 bits. The following diagram helps to explain this:

```
                         Integer
|S                        | |S                            |
                          * (signed multiply)
|S| |S        MSP                     LSP                 |
 |  <---------------- 2N-1 product ------------------>
 |
sign extension


                         Fraction
|S                        | |S                            |
                          * (signed multiply)
|S          MSP                  LSP                   | |0|
<--------------------- 2N-1 product ------------->        |
                                                    zero fill
```

The difference is in the alignment of the 2N-1 bit product. In integer multiplication the 2N-1 bits should be right aligned and the sign bit duplicated. This is how the processors own multiply instructions work. In fractional multiplication the 2N-1 bits should be left aligned, and a zero filled in the least significant bit. It is normal for an integer multiplier to discard the MSP of the result, and for a fractional multiplier to discard the LSP.

ARM-ful of numbers

In order to use a fractional number representation from a high level language like C we must create our own multiply functions that correctly position the result. The StrongARM processor supports the long multiply instruction. That is a 32 bit by 32 bit multiply to give a 64 bit result.

Actually as we have just seen, the result only contains 63 significant bits, the sign bit is duplicated. For non StrongARM machines that do not have the long multiply instruction or will not allow it in RISC OS, we have to perform 4 partial multiplications and combine the results. This was covered in the ARM Code tutorial on the AUCD11. There are two files "multiply.s" contains the quick long multiplies and "multiply_.s" the slower version.

An example

I have chosen a simple implementation of an MP3 encoder to illustrate the increase in speed that can be obtained by the successive removal of floating point operations. As stated, the encoder is simple, and does not perform well at low bit rate outputs.

In fact at a bitrate of 32k it becomes a rather interesting sound effects unit! It is however, ideal for the purposes of this tutorial, and in any case, produces perfectly

adequate results at bitrates of 128k and above. The files for this project are available on the *Acorn User* Web site and will be on the next CD.

The source files to look at are in the directory 'main' and are commented where changes have been made by comments starting with the string /*—

Four different versions of the multiply function are used. This is because it is sometimes quicker not to left justify the result if you need to scale down the number before a subsequent operation. It is also not necessary to round, if the number accuracy is in excess of requirements. So the four versions are multiply, multiply+shift, multiply+round, multiply+shift&round. See the source code files "multiply.s" and "multiply_.s".

When modifying code, don't do too much at a time. Test the code at each stage. For this example, the quality and volume are easy things to check. If the volume has changed our numbers have got bigger. If the quality has got worse accuracy has been lost, or maybe there's been an overflow.

Timing analysis

See the file "Layer3.c" First of all, we need to identify where the cpu is spending it's time. The frame conversion loop calls four main functions, so this looks like a good place to insert a bit of test code to count time spent.

1. Filter (input samples, window and sub-band filter)
2. MDCT (modified discrete cosine transform)
3. Loop (main quantising iteration loop)
4. Format (bitstream formatter)

A short, WAV file 21 seconds long was used for testing. Tests were all made on a 233MHz StrongARM Risc PC, at a bitrate of 128K bits/second.

The number of system ticks (10ms) spent in each function was counted by using of a bit of test code and the results are shown below. The timings will only be approximate because they will be affected by what else the machine is doing.

Filter	75714 (55.24%)
MDCT	39079 (28.51%)
Loop	21688 (15.82%)
Format	563 (0.41%)
Finished in 0:23:05	1/65.8 real time

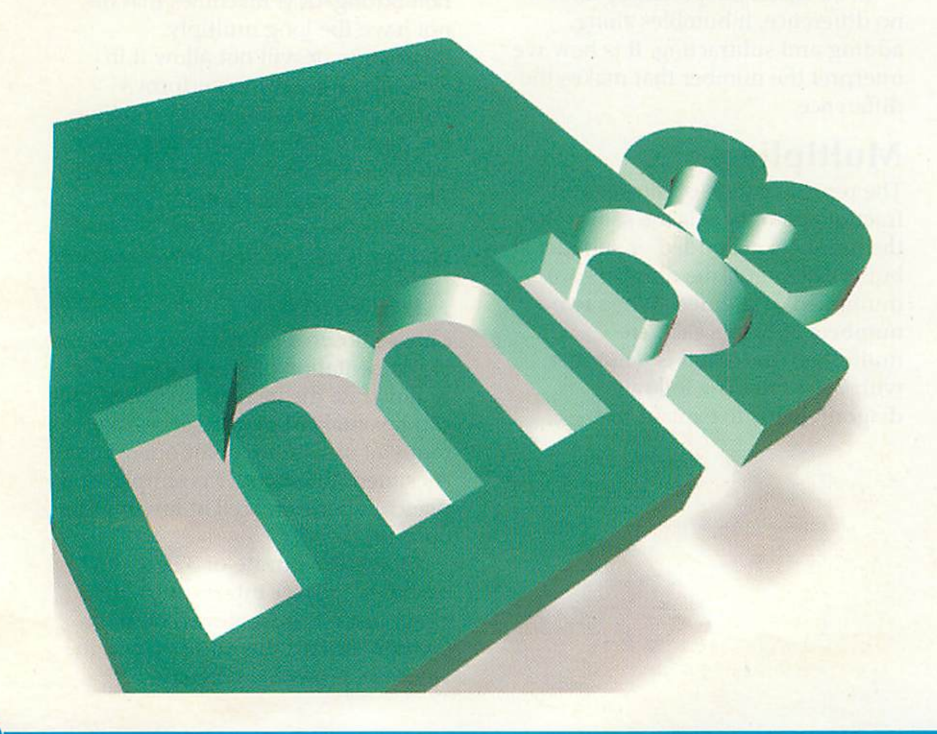
So the Sub-Band filters are the first point of attack. 757 seconds mostly spent executing a single line of C in the polyphase filter. The MDCT transform comes second followed by the Iteration loop. The Bitstream formatter is pretty quick so we'll leave that alone. As a comparison, the same code compiled using Microsoft C on a 166MHz Pentium PC took about 1 minute to encode the same data — because of the hardware floating point.

Filter conversion

The source file to look at here is "L3subband.c" The stereo signed 16 bit samples are input from the data file. They are scaled to fractional floating point then passed through a window filter and finally a polyphase sub-band filter. The number range throughout is kept approximately between +1.0 and -1.0. The maximum required accuracy appears to be 9 decimal digits. A 32 bit number is about 9 decimal digits so it looks ok.

After conversion to fixed point, the input samples are shifted 16 bits left to the upper half of an integer. The coefficients for the window filter are scaled so that subsequent operations in this section will result in a fraction as near as possible to maximum. This is done to save on down-shifts later and to maintain the maximum accuracy we can. The filter coefficients are scaled to produce an output from the filter that is again as near to maximum as possible without overflow.

For now we have to convert to floating point at this stage to feed the original MDCT stage. Please





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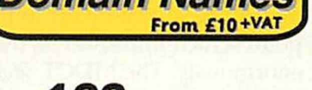
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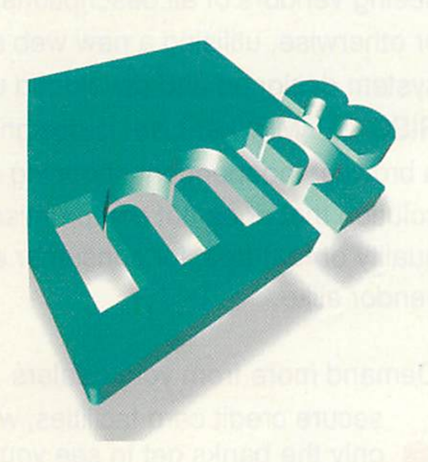
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note that I have not included all these incremental builds in the examples directory. So you won't find the fixed to float conversion at the end of "L3subband.c". The timings below include it though.

Filter	42702 (40.97%)	
MDCT	39433 (37.83%)	
Loop	21534 (20.66%)	
Format	546 (0.52%)	
Finished in	0:17:33	1/50.1 real time

MDCT conversion

Here we move to the second on our hit list, the file "L3mdct.c" MDCT transform code changed to fixed point. The window/filter now doesn't have to convert to floating point which improves its own time enormously. The MDCT section also passes integers to the iteration loop, which was doing a conversion in any case so this didn't increase it's time much.

Filter	2197 (8.13%)	
MDCT	968 (3.58%)	
Loop	23542 (87.17%)	
Format	297 (1.09%)	
Finished in	0: 4:30	1/12.8 real time

Loop conversion

Now for the tricky one, "L3loop.c". We have to be very careful here about accuracy. The main iteration loop was tidied up — some floating point calculations were being done more than once. Quantizer Step size initialising was done two different ways, the first was overridden by the second and was removed. Finally, nearly all the floats changed. There are a few places where floats must still be used but these don't occur frequently during execution.

Filter	2176 (47.20%)	
MDCT	956 (20.73%)	
Loop	1162 (25.20%)	
Format	316 (6.85%)	
Finished in	0: 0:54	1/2.57 real time

Further tweaking

See the file "L3asm.s". The filter and transform stages can be further speeded up by coding the long multiply instructions directly into the assembler source produced by the compiler instead of calling assembler functions from the C code. The disadvantage is that it becomes difficult to change the C code, and it will only work on a StrongARM.

Filter	1801 (46.09%)	
MDCT	630 (16.12%)	
Loop	1173 (30.02%)	
Format	303 (7.75%)	
Finished in	0: 0:45	1/2.14 real time

Although this does increase speed, the cost is high because now any change to the C source code involves creating an assembler source, replacing the multiply instructions, then assembling. This is tricky because a small change to the C source may make the compiler use different registers so you can't just cut and paste your changes.

There is little more that can be done to further increase the speed without a lot of hard work. Execution time is now spread much more evenly throughout the code, and there are no real 'hot spots'.

The overall improvement in speed is very good, about 30 times faster, and the quality has not been compromised at all as far as I can tell.

Non-StrongARM

Shown below are the timings using the slower multiply routines on the same 233MHz Risc PC so a comparison can be made. These use the source 'before further tweaks'.

Filter	4642 (54.97%)	
MDCT	2131 (25.23%)	
Loop	1384 (16.39%)	
Format	287 (3.39%)	
Finished in	0: 1:30	1/2.57 real time

Just for completeness, and because it's the only other machine I have I did the same test on an A3010:

Filter	302836 (58.59%)	
MDCT	137313 (26.56%)	
Loop	62098 (12.01%)	
Format	14581 (2.82%)	
Finished in	1:44:24	1/298.28 real time

Phew, 1 3/4 hours for 21 seconds of music. But it worked, and I wouldn't mind betting that's the first MP3 file ever to be produced on an A3010 — possibly the only ever.

Example source code

The 'main' directory contains the source code prior to the "Further Tweak". The 'extra' directory contains the files that have been "Further Tweaked". The source code is commented to show where relevant changes have been made and why.

It compiles with GCC 2.7.2.1, Unixlib v3.7b, and the AS assembler v1.30 all of which have appeared on *Acorn User* cover CD's. It will link to the Shared C library as long as "SHOW_TIMINGS" in *types.h* is commented out. Sorry, no makefiles, I wrote my own simple make some time ago and it's a bit non-standard. Build Obey files for GCC are there though.

Warning

A small word of warning, MPEG Audio compression is covered by patents. Have a look at the following sites:

http://www.mp3-tech.org/
http://mp3licensing.com/royalty/swenc.html

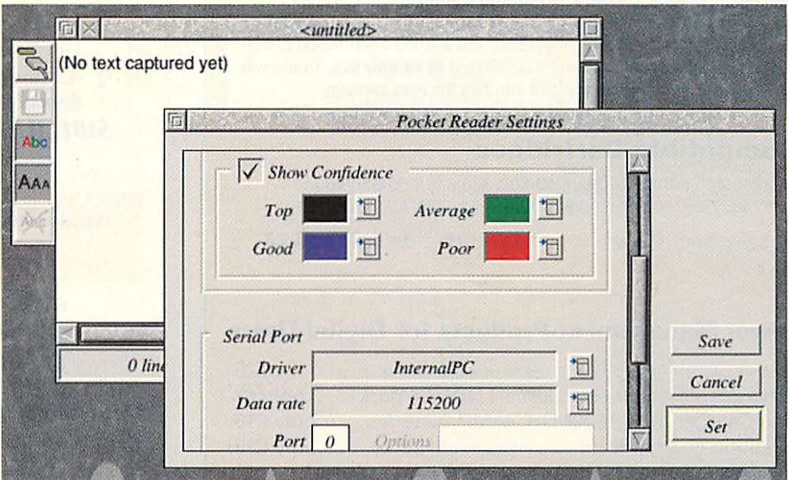
Having said that, the source code is free, which means that you can do what you want with it for your own experimental purposes.

Written word

Steve Turnbull looks at a new toy

Once upon a time there was the pen for writing and the eye for reading, then we gained scanners and someone invented Optical Character Recognition (OCR) software so that scanned words could be turned into manipulable text. And now we have the scanning pen.

It's a funny old world nothing happens for ages and then new products start appearing all over and so it was with the Reader Pen from CJE — in fact it took them by surprise too, the software took very little time to write on RISC OS but I'm getting ahead of myself.



The Siemens Pocket Reader is a pen-like device with a tiny little scanner at one end — along the lines of a barcode reader — some clever stuff in the middle and a serial connector at the other end.

The clever stuff in the middle is software that will take a scneed line of text and turn the bit-map image into real text and add it to its memory. You can scan line after line of text, up to twenty A4 pages-worth and then plug it into a computer and download the text using the software provided.

The RISC OS software comes on a floppy disc which is installed in the usual way — no protection required as there's no point in having the software if you don't have a pen. Support your local dealer and get CJE's pen and software! A nice touch with the software is that it doesn't get upset if the reader isn't attached and doesn't hang the machine looking for it.

So far so good. This is all fine in principle but how does it work in practice?

Those who remember handheld scanners will also recall that the way the scanner knew that it was moving across the scan surface was a little wheel or roller that contacted the image. The Pocket Reader has a little wheel at its end. You place the end on the page and an internal light illuminates the area to be scanned; you drag the pen along the line and the wheel turns telling the pen to scan.

At the end of each text line you can either just stop, or you can add a hard Return, or you can go back and delete what you've done (or part of it).

Why would you want to delete it? Because sometimes you get garbage. There's a knack to using this pen and certainly at the beginning you are going to have a hard job getting it right. Although you get trained in fairly quickly you'll get a lot of "line lost" error messages.

While I didn't have time to test the pen out extensively I did find it worked pretty well. One of my main concerns was that it wouldn't be able to handle small text where the lines above and below encroached into the scanning area — well it did work well and I didn't get any messes on that. The size went down to about 6pt text but the clarity of the image is going to have quite an effect

The memory on the pen is not volatile so it persists between switching off and switching back on again — useful if you're scanning away from your computer though images of spy networks come mind for some reason.



As we were going to press CJE rushed me a new utility that works alongside the main reader software. This helps to alleviate one of the difficulties I have with the reader — what problem is it solving?

The new software inserts saved text into the keyboard buffer which means that you can use it for adding names and addresses to databases, for example. Or perhaps you're replying to a letter where the person is not in your files — just scan from his letter and insert into yours.

Nice little piece of kit and jolly fun to play with.

Product details

Product:	Pocket Reader
Price:	£62 (inc VAT)
Supplier:	CJE Micros, 78 Brighton Road, Worthing West Sussex BN11 2EN
Tel:	01903 523222
Fax:	01903 523679
E-mail:	sales@cje.co.uk
Web:	www.cje.co.uk

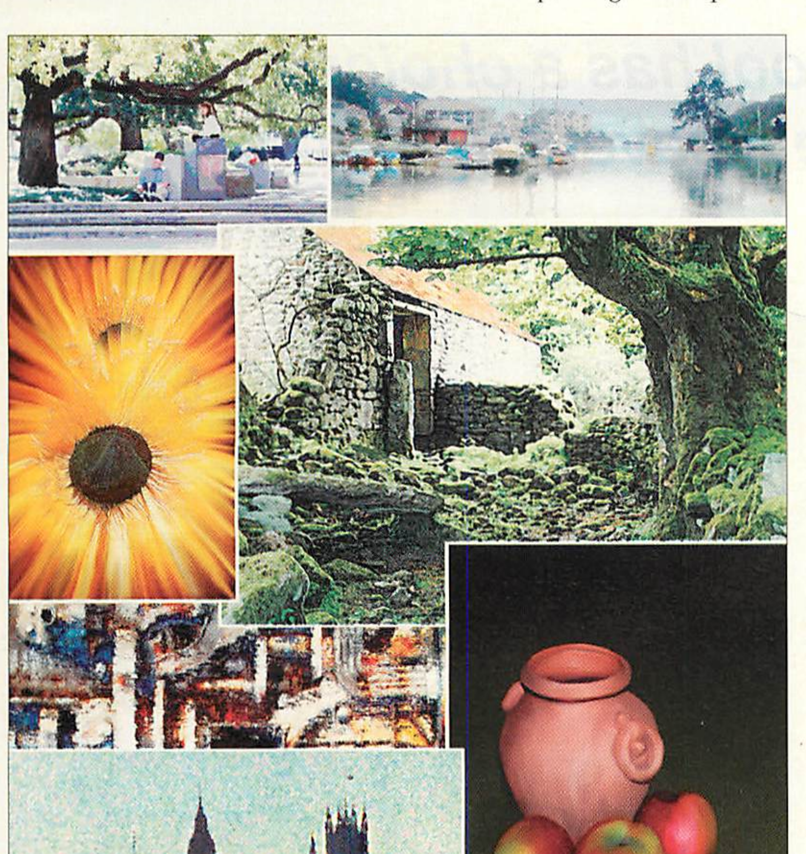
Cover art

Chris Hornby on David Cowell's creativity

All of the artwork for the cover of the last issue of *Acorn User* was created by David Cowell. David has a totally RISC OS-based art studio in the grounds of Dartington Hall, South Devon. And all of the paintings are produced using *Photodesk* and a pressure sensitive stylus.

The work that David creates is from sketches and colour notes made on site. He also takes a digital photograph to remind him of the original stimulus back in the studio. The sketches are not scanned into *Photodesk*, David prefers to redraw on to the screen to capture the essence and characteristics of using the digital medium.

The paintings from top left are:



1. Siesta: This painting was created from a sketch made on a visit to a Texas university. The air temperature was high and many of the students gather under the shade cast by the oak trees. The light filtering through the leaves was fantastic and the figures are painted in shades of blue to emphasis the coolness.

2. Kingsbridge Estuary: This painting attempts to capture the stillness of early morning with a very soft light.

3 Sunflowers: An explosion of colour

4 Emsworthy Barn Dartmoor: This was an attempt at painting in a photo real style. The old barn is in a small valley and completely hidden and very isolated and surrounded by the bleak moorland. Thick mosses cover the stones creating a texture and enhance the feeling of isolation. The detail in the original is very precise and took much longer than expected.

5. Still Life: The weather was so bad that Dave just couldn't go out so this arrangement was created as an execise and to practice drawing skills.

6. Westminster: Painted in a pointillist style.

7. Swayling (burning off): Living in Devon this is a frequent sight in the late summer. The stimulus for this painting was a controlled fire on the edge of Dartmoor.

8. Cathedral of Light: This painting attempts to capture a pen and wash technique.

David is the only UK member of the International Digital Painters group based in California. **www.digitalartsgroup.com** This group of painters, using digital media only, have come together, through juried acceptance of the high standard of their work, in an attempt to further their chosen medium as a recognised art form.



Saints & sinners

A teacher-specific site worth the visit is TagTeacherNet – **www.tagteacher.net** – a source of news and information for the teaching community.

The site is totally free and includes the latest education news, quality lesson plans for all core curriculum areas, job search information and listings, competitions, out-of-school fun, stress free activities and lots more.

In addition, TagTeacherNet puts teachers in touch with teachers through discussion boards and registered user profiling. And just to get you talking, 86 per cent of respondents to their 'Saint or Sinner' poll have voted Chris Woodhead a 'Sinner'. Less frivolously a second poll indicated that 56 per cent of TagTeacherNet will take industrial action over current teacher staffing shortages.

While a fortnightly *Newsletter* provides community activity updates, teaching materials, site of the month, technical tips and so on. Add to this: free ISP and webmail service, 25Mb personal web space and unlimited e-mail accounts, a comprehensive directory of resources covering all the curriculum areas and prepared by specialist teachers, software previews as well as *Grapevine* — an information network for all members to communicate ideas, advertise or make announcements.

You can drop in on the sections you want directly. For instance, *Resources*: **www.tagteacher.net/resources/** – this resources section covering all of the major curriculum areas and featuring good and innovative resources that the Internet has to offer. From journals and associations from around the world, to webcams, lesson plans, interactive testing and so much more! Look out for new Personal and Social Education resources.

Or how about *Planner*: **www.tag teacher.net/planner/** – you can search by subject and by date to get information on courses, conferences and seminars presented by all the major subject and professional associations.

You can also use this site to access the Walkers Showcase (**www.walkers showcase.co.uk**) to exhibit pupils' work. Walkers Showcase is an online gallery conceived of and developed by TAG in conjunction with Walkers Snack Foods, Sun Microsystems and Cable & Wireless.

Anglian update

Anglia's online Big Books are now accompanied by word level support activities. These have been designed to allow Key Stage 1 children to explore phonic groups as well as to develop their spelling skills.

Also look out for The Learning Exchange which contains a range of useful educational links compiled over the years. This has been re-designed recently so that it is easier to search, automatically identifies and removes broken links (so you don't waste time going to a site which is no longer there).

It also allows you to tell us about any Web sites which you think deserve to be included in this comprehensive resource. But if you're in mind for an adventure and feel you could help Colt Phoenix save the galaxy in Martian Mayhem, just visit Adventures for great animation, and puzzles.

More historical know-how in the age of empires and machines is addressed in two new Word Whizz History units. By using key words, secondary students can discover the relationship between *Trade and Colonies* and how the world changed forever thanks to the *Industrial Revolution*. These two special needs units are aimed at KS3 and KS4 (ages 11-16).

www.angliacampus.com

In brief

Softly spoken

Users of Textease Studio and Textease 2000 can now create documents in French and German and spell check their work. Achieved through Softease's Textease Modern Foreign Language Packs this is a superb tool for teachers and students with each pack featuring menus and dialogue boxes, an intelligent spellchecker providing a range of words to choose from as well as a special accent option which automatically adds accents where appropriate.

By using the multimedia features of Textease pupils can create story board projects incorporating animations, video, recorded sound and links between pages to further enhance the learning process. The packs cost £39 each - for more information contact Softease at 01335 343241.

Storming along

SMUDGE and friends at Storm Software (01747 858323) have undergone a facelift. The software runs within an Internet browser running easily on a standalone or networked machine.

At present you can buy a bundle of six numeracy and literacy titles for 4 to 9-year olds, which come with user guide, curriculum links and additional materials, on disc. The cost is £55 or £12.76 each.

For numeracy there is Launch Pad, Asteroids, Dot to Dot, Flash Quiz, Colour and Count, and Smudge's Sorter. While for literacy there is Writing letters, Jigsaw, Make a Picture, Complete the Words, Fill the Gap and Word Processor. Demos of all the programs can be accessed at:

www.stormeducation.co.uk

Contacting me

Pam Turnbull:
educ@acornuser.com

Learning on

Pam Turnbull puts one of the new graphical and fun learning sites through its downloads

With increasing numbers of software houses putting their products into browser environments and more and more schools opting to spend cash on permanent Internet connections, the time is ripe for good quality activities which can be pulled straight off the Net.

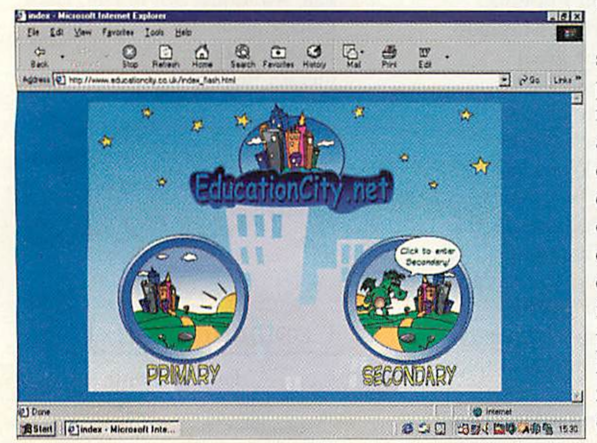
Espresso, *Anglia Campus* and *Argosphere* (soon to be mutated into the *Big Bus*) have been developing along these lines for some time and have a large resource of activities to delve into. But what about the new guys?

EducationCity.net comes from the REM stable so has a reasonable education pedigree. You'll need Flash 5 to get at the site and accessing the pages and games is not ideal unless you have a fast Internet connection. The site will still load anyway but the children will have lost interest. Better still download the programs you want on to your hard disk or network to save frustration – the pupils and yours – though you'll need an additional utility to do this for you as the site doesn't give you this option.

This is a subscription site – with introductory demo games for interested visitors – and, as with others of this genre, finding your way around is not as intuitive as it should be. For instance, to log into the system click on the Primary button (or Secondary it you're that way inclined) and the appropriate screen will load. I was a little disappointed that there was no difference in the two screens, both are hosted by the same range of cartoon children with no theme to distinguish them apart from a P or S in the corner.

Your next step is to click on the *About* button followed by the *Admin* which takes you to the area that a school's Technical Administrator would use to set up machines for access to the site without needing passwords each time. At this stage you must key in the school name and password to unlock the games, planning and analysis aspects of the site.

The games are the meat of this site, and at the *Primary Level* there is Maths, English, French and Science subjects to access (as long as you've subscribed to each subject) hosted by Stan, Stig, Klara and Manu respectively. For the *Secondary Portal* add German to the menu – although this was not available at the time of writing.



Choose your subject area and you're presented with a number of games which are in turn sorted into categories. For instance, click on Stan and he'll offer you three calculation games, three on the number system, four dealing with problem solving with a further five covering measures, shape and data handling. Indeed, REM promise at least ten games per subject.

Most games use sound and animation, but apart from the title and category you really have no idea of the level and key objectives of each game from this menu. You can just take pot luck and when you make your choice clear instructions are given on how to play the game.

However, to find out what each game will do, there is the *Game Info* button which provides a complete database of all the games. As well as age and level information you can also click on the *Lesson Plan* button. There may not be a huge database of games at present, but REM have thought about each one and indeed these are not mere games to while away a few minutes at the end of a Numeracy Hour, rather they can be incorporated into individual tasks meeting a particular target.

So you've read the information, seen a screen shot and pressed the Lesson Plan button to help with your workload. You now have a PDF file at your disposal complete with screenshots and useful data whether you opt for *Slamdunk* or *Gone Fishing* for English, *Shop for Fun* (coin recognition) in Maths or *Flower Power* for recognising the key elements of a plant.

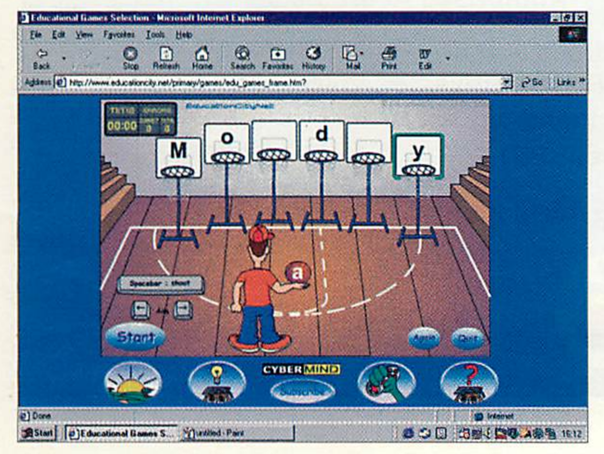
Make your own

You can customise the games too and this feature is accessed through the *Create a Game* button. To use this facility you understandably need to use a Teacher name and password. You're offered a list of titles, data, subjects and Key Stage. You can also use this area to search for relevant games to your teaching.

Enter the relevant details and up



line



pops information on the game chosen with the option to play, access the lesson plan or input your own information/questions before saving the version for future use. A little fiddly to use and access as well as something which will need some organisation and control – although I doubt very much if every member of staff will delve into this aspect of the Web site.

When it comes to finding out what's what there is an online help via the *Help to Use* button and I'd recommend accessing and printing this for future reference – though this is a little time consuming and a simple PDF or text document which could be simply downloaded would be quicker, as it is the PDF is opened and then printed out.

Planning and analysis

Once you have planned and your pupils have played, there's the *Analysis* button. This is only available to teachers and provides a central location for recording children's performance.

The site is freely accessible to browse, however the games are protected by an automatic system that checks your computer for a security tag. You can browse before you buy and I'd recommend that before you commit yourself; look around the site as much as you like and play the demo games.

I was disappointed that not all the site was available at present. What is there is good, and the added extras are useful, but to be frank I'd be loathe to spend £240 on it as it stands – more if you're in the secondary sector. Yet children like the format, the instant feedback and the originality. The site is still being developed and this is one I'll be keeping a close eye on to see if it fulfils its considerable promise. END

Science Year Website

www.scienceyear.com

The Department for Education and Employment (DfEE) is officially launching the year in September 2001. Prior to the launch date, there will be a number of warm-up activities to raise awareness about the Year.

There will be a TV advertising campaign aimed at 10 to 15-year olds which will highlight the role that science and scientific principles play in everyday life as well as emphasising the fun side of science. These encourage children to send off for a Science Pack – or visit the Web site.

A seven-card pack is used to demonstrate that science is all around us; that it is working when you laugh, play football or listen to music. These are no ordinary cards as they are intelligent and respond to their environment. Change their environment and see what happens! Look out for science facts too ...

One card is heat sensitive in the same way silver grains on black and white photography film are light sensitive. A chemical change occurs in the red paint when it is exposed to heat. The silver on the film also undergoes a chemical change when exposed to light. Touch this card and watch it change colour. You have transferred energy in the form of heat from your fingers to the card.

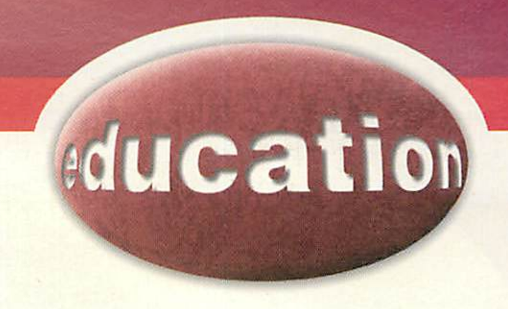
This ties into a *Science Fact* – a human body always tries to stay warm at 37C but if you are losing heat quickly your fingers may be colder. Your body reacts to a change in temperature. When it is hot you sweat to lower your body temperature. When it is cold, you shiver to raise your body temperature. This is part of a process where the body tries to maintain the same internal environment when the external environment is changing. This biological process is called homeostasis.

To accompany the student card pack is a teachers' booklet suggesting points for discussion to help you form lesson plans around the cards. The Web site offers competitions and games which can be downloaded or played online. So at present you can find out how it feels to be an alien invader in the body's bloodstream.

But Science Year is also aimed at parents, business and the science communities. One of the sections still under development is *Chalkface* which is a teacher's corner and home to resources from downloadable project material to the latest facts and figures.

Also under development is *Science Xtra* with practical homework tips, career information as well as scientific profiles and forums. Add to this, *Living Science* profiling science behind the headlines of everyday life plus the cutting edge of future research. Then there's a *Science Library* with a host of vetted science resources veering from the fun to the formal.





Developments

Kerry Hall records the history of a new tribe

Six months ago a unique solution for the education sector, was launched. Its name, *Passport2Learn*. Its mission, to change the way schools manage their Internet connection and usage.

While *Passport2Learn* may be a new face for the RISC OS market, the software which makes up the package has had a close relationship with RISC OS and the education sector, since its inception.

Navaho Technologies Ltd began life five years ago with one product, the Navaho Schools Server. In 1995 Chris Audley, now Technical Director, sat down to write a simple, reliable proxy server, with Web-based configuration, which would enable multiple access to the Internet via one modem, something previously unavailable in the RISC OS market. The response from the education sector, following the release of the software on an FTP site, was overwhelming.

Other users wrote in with comments and suggestions, and it was as a result of this input, that the Web-based e-mail client was added.

The next version of the software included several other features, however the most important, a suggestion from one teacher, was for filtering. The development of filtering options for the server was then taken one step further.

Listening to the feedback from the many teachers Chris was in contact with, he wrote in auditing tools, which aimed to allow simple configuration and management of the server. In essence, the Navaho Schools Server was developed by the teachers writing to Chris with their ideas.

In April 1999 Navaho, at that time based in Alton in Hampshire, officially launched the fully-fledged Schools Server. It provided an entirely Web-based front offering e-mail, Internet services, Intranet facilities, management tools such as filtering for both e-mail and URL's, logging and auditing tools. The company also started looking into wireless networking, faxing and SMS (mobile phone messaging).

It was during this year that Navaho decided to port the software onto a box server appliance. With its multi-faceted product Navaho moved away from solution provider to software development company.

In 2000, Navaho ported to the server OS, Linux, running on the x86 platform. The Web-based nature of software has meant that despite this move, the Navaho server is still available for RISC OS, which remains a big part of the Navaho ethic, with all testing and development still carried out on them.

The code initially written by Chris is still core in the progression of the software and its applications. Teaming up with Argo Internet Services, the Acorn ISP, the Schools Server was developed for the UK education sector, into a whole package solution, *Passport2Learn*.

Passport2Learn combines the stable Navaho software, which is client-independent, with dedicated ISP connectivity and a one-stop support line, the *Passport2Learn* helpdesk.

Passport2Learn is a unique product in the UK. It has been developed specifically with the intention of providing schools with a solution that will fit simply into their existing networks and will work across all platforms. The Web-based nature of the solution has meant that any school with a variety of machines, including RISC OS, Mac and PC can retain existing infrastructure with no extra cost or work necessary.

Passport2Learn

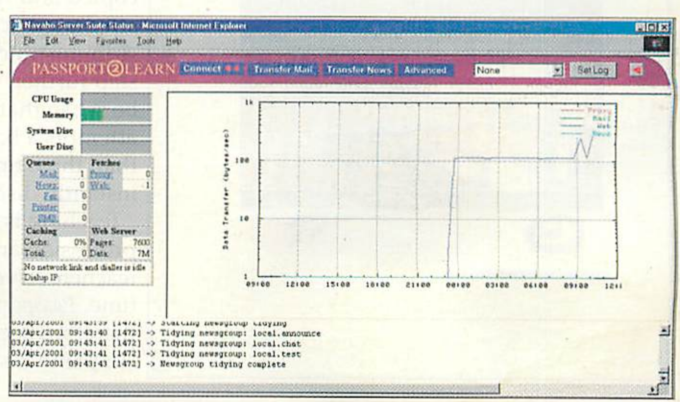
The solution starts with the software, now consisting of combination Web, mail, proxy, file and print sharing servers, the Web-based program facilitates easy access from any browser, any machine, anywhere in the world.

The package provides different settings for every user group, from primary schools to 6th form colleges, pupils and teachers to more technical users like the System Administrator or IT teacher. Access to different features is restricted depending on the template settings.

Specifically with the Administrator in mind, the Navaho software has developed to enable total control over every aspect of the server, whether that is usage patterns, filtering or simply configuration issues. It is simple to use and provides step-by-step guidelines and explanation of its many features.

Basic features

As well as its own e-mail client, *Passport2Learn* is also POP3 and IMAP4 compliant. Internet access is simple and fully controlled by the server, which also enables schools to



host their own Intranet site.

In addition to standard functions, the software includes a Personal Information Management system, PIMs. Designed to be an organisation and administration tool to aid teachers, the PIM system is also useful for older pupils to manage their timetables and free periods.

The new Groupware function is aimed at making life for teachers easier, as room and resource bookings can be made at the click of the mouse. PIMs also contains a fully functional fax server and SMS system, ideal for reducing the hassles of paper-based administration.

Filtering

Given recent reports into the plethora of inappropriate material available on the Internet and the prevalence of unsavoury characters in chatrooms, security is at the top of every parent and teacher's list of concerns. *Passport2Learn* has its own carefully designed filtering tools to prevent unsuitable information being downloaded from the Internet or sent around the networks via e-mail.

For URL's, the filtering works on a block and allow list basis. As an extra precaution, the filtering will also ban sites if it registers a banned word as listed in the content filter files.

For e-mails the system is similar, with content filtering, although additional features enable limits to be set on file size, file type and mails received from certain addresses.

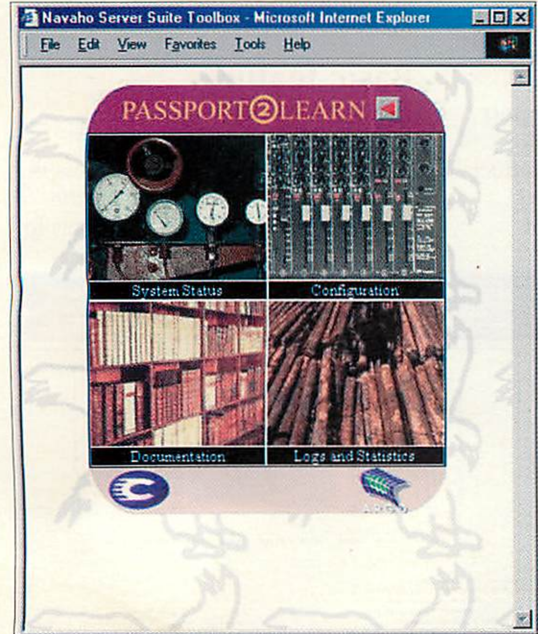
For control over the filtering options, *Passport2Learn* have included time set filtering, for off and on peak usage. These can be applied, as can any of the filtering rules, to different year groups. For example first years might only have access to the Tweenies Web site at lunchtimes, whereas sixth form have less restricted access throughout the day, particularly after school ends.

Continuing the ongoing mission for control, the solution includes certain flexible local controls for teachers. Without having to contact the Administrator, individual teachers can change a pupil's password, allow a banned site if necessary, and disable a specific machine.

Control

The key theme that came from the teachers that Chris spoke to years ago, was control. As a result, the system now includes a host of auditing tools and configuration options, which are simple to use, and can be accessed from anywhere.

Real-time status pages enable Administrators to keep an avid eye on how the system is running, including the temperature, as well as monitoring bandwidth usage and connectivity.



A number of different log search facilities will allow instant checking on individual user habits, blocked user information and statistical system usage information. Blocked users can also be flagged up instantly, with the request copied and redirected with attempted access time to the Administrator. Going one step further, the system can be set so that any user, who attempts a banned site more than three times, will be instantly disabled.

Teaching is a demanding profession and one resource teachers have very little of is time. *Passport2Learn* is therefore been designed to be simple to install, easy to use and has been built to enable fast and easy management of any computer in the whole network. The system can be installed in 15 minutes, requires low maintenance and is fully supported by IT professionals. It enables the network manager to easily configure and monitor the suite. The system can be configured to authenticate passwords with an existing NT server, saving time and confusion.

Connectivity

To make the solution complete,. *Passport2Learn* provides every tool necessary to get online. The software is pre-installed on Sun Cobalt server appliances, which due to their front panel management system, can be installed and configured swiftly.

The software and the hardware have been specifically combined to shield users from technical complexities and aims to save time for the school.

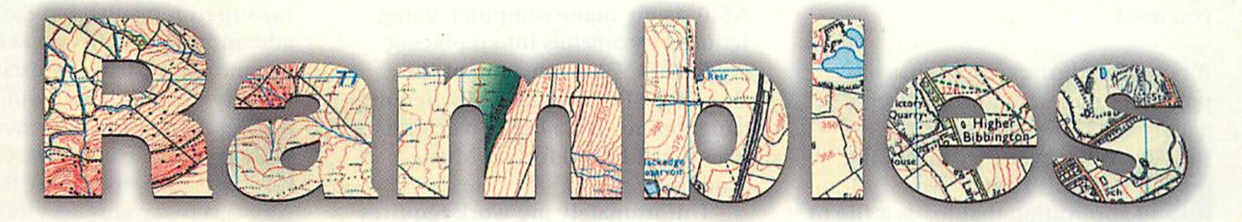
The dedicated ISP backbone has been built for education. It has been tailored to suit the Internet usage patterns of schools. The high-grade redundancy, with dual power supplies offers a guaranteed connection for every site. The infrastructure has been custom-built to enable total control over every aspect of the network.

When the Administrator needs a little help, now is the time for an effective support system. Unlike any other solution available, *Passport2Learn* has simplified the support process, with one number for all queries. The combined support option included in thes cost is the one stop yearly support line. Any issues or questions on software, hardware or connectivity can be answered by the help desk, saving you time and downtime costs.

While the system was born from different areas, the solutions roots are firmly held in the RISC OS market. Without the enthusiasm of fellow RISC OS users, the original software would not have developed as quickly or as focused. The Navaho Schools Server has progressed from a small product for a specific market, to a universal solution, which aims to fit the needs of every educational environment. END



RISC OS



Mike Cook buys another round for RISC OS users

First a bit of feedback from last month, you might remember Gareth was having a bit of a problem understanding some machine code, it seems something is still wrong.

Q "I've been studying your reply but I'm afraid that this register problem is still bothering me. What you said about R8 being set up in the screen area: okay for starters, in the original program the STR instruction used R0, I was curious to find out if it would work with another unused register, for example R8 or R12.

"Of course it did, which puzzled me, as this register was not allocated to the address of the screen memory and so from my point of view, it was storing bytes into an empty space. I can believe that the register could be set up in the screen area, but how can all 15 registers be set up in the screen area, as I've tried them all.

"To help illustrate things a little better, I've sent you an example of the slightly modified code, which is not written by me. Hope you can help me figure this one out!"

A As this is not Gareth's own code I can't reproduce it here but basically a register points into the screen area and stores a bit pattern there. Then this bit pattern is changed by a sequence of shifts and exclusive OR operations, the result is a screen full of random stripes. However, I am not sure what is happening at his end as the program supplied to me does exactly what it should do. That is, if I run it I get the stripes. If I change the storing instruction to say:

```
STRB R3,[R8],#1
```

Then the machine crashes as R8 has not been set up to point to anything. I would expect nothing else as you are poking values into who knows where? But you are still poking values somewhere, not empty space. I simply don't see what is reported and I have tried running it from the Desktop and from a BASIC prompt with the same results.

This one might just run and run.

Maurice Barigye a student of Electrical Engineering, at a University in Kampala, Uganda. Has been given a problem:



Q "I've been reading through some of your articles, which I discovered online and I believe you could help me out. I am trying to design and build a pre-stable down-counter system, a master clock driving 1 or 2 slave clocks for my project. I would like to have a four digit display, two digits for the minutes part and two for the seconds part, with each digit about 15cm tall and 7cm wide.

"I wanted to use bulbs for the display, say 5v or so, because I thought LEDs would not be as bright, that's in case I use a 7 segment display. I don't know if its possible to use any other kind of display. I would be very grateful if you provided your opinion on the above, which I think would be the design for master clock, and then advised me on how to proceed and if possible with some circuit diagrams."



A I am sure that you don't want me to provide you with circuit diagrams as it would then be my project and not yours, however a bit of advice would not do any harm. You have two problems here, the display and the counters.

For a start I would use 74LS190 BCD synchronous up/down counter, use the countdown mode. These counters are presetable so feed your BCD switches into the inputs and pulse the load input. As you want the seconds counter to reset to 6 in the countdown mode you need to take the ripple and max/min outputs from the previous stage and use them to switch in a load value of 6 rather than coming from the pre-set switches.

Use some multiplex switches like the 74LS157 to choose between the time set-up switch and the signal from the previous stage. All you need then is a source of one second pulses. A cheap option is to use a 32.768 KHz watch crystal and a 15 stage divider circuit, you can get a single CMOS package to do this I think.

Now having got a BCD value you need to decode this to give you a 7 segment display bit pattern. You could go for something like 74LS45 (46 or 47 or 48 or 49) or you could make one yourself, using separate gates, and have fun with karnaugh maps minimising the design.

Your final problem is one of the display and driving it. It is probably best to use bulbs, low voltage torch bulbs wired in parallel would be best with several bulbs for each segment of the display. Then you only need to buffer the current from the TTL levels to the amp you need for each segment. Remember this requires quite a bit of current for the overall display. For the slave display you are best sending over the BCD digits rather than the 7 segment display values to save on the number of wires

you need.

A bewildered Andy Turton has a problem running the Acorn User game *Destiny*, he writes:



"Whenever I try to run the game all I get is 'An application that loads a file of this type has not been found by the Filer. Open a directory display containing the required application and try again'

"I have copied the full *!Dest* application from the CD onto my hard drive and I have also tried copying the RISC OS 4 patch over the top, but to no avail. It appears that many of the files within the *!Dest* directory are data files although a few are Basic. Can you suggest an answer to this problem. I run a Castle Web Wizard Kinetic under RISC OS 4.03. I have tried the demo version from the RISC World CD and that works OK."



I have had little experience of *Destiny* but the experience I have had would seem to suggest that it can be upset by many utility programs that can pile up on our machines. Things like *Longfiles* and automatic compressors like *Squash*.

I would try booting up your machine while holding down the Shift key. This will prevent the *!Boot* from loading, then go and initialise just the things you need to run *Destiny* and try again. The nature of the error message however suggests that rather than there being too many extensions you have too few

Almost as if in a boot file you are issuing the name of a file expecting some run action and there has not been an application visible. In which case you could look in the *Destiny* folder for files with just a blank icon. Then look at the file type of this and see what this corresponds to, this then could be your missing utility.

Mike Constable is trying to straddle both RISC OS and PC worlds:



***"I have been using an Acorn right from the days of Archie,* I still have my upgraded A310, as my home computer, being seduced by *Sibelius* into replacing my Risc PC 700 with a top of the range Risc PC StrongARM when my daughter needed a better machine than the old A310 for her Music Studies.**

"Unfortunately my work requires me to be familiar with the Microsoft Office Suite of programs, which has not made it easy for me to work at home. Having finally given up with the disastrous Internet access on the Acorn, having to pay for a service which at best was poor, and having to keep purchasing 'extras' to enable me to read so many of the messages sent to me, I succumbed and added a Windows 98 machine, to the home set up.

"I share a monitor and printer, through switches, between the two, and currently have two separate flatbed scanners connected, as one is a USB. I also have a SCSI scanner connected to the Acorn but no SCSI board in the IBM clone. I would like to be able to connect the two machines together so that I can use the SCSI scanner with the IBM machine, and also my new USB Canon colour printer with the Acorn using the IBM drivers as having to buy separate drivers for the Acorn will more than half the savings I made in purchasing that printer and the IT guy at work suggested a network.

"I use Laplink to connect my laptop to the IBM, as neither of these has a network card fitted but I know very little about networking these days, and haven't a clue whether it is possible to network an Acorn with an IBM. I do know that Stuart Tyrrell's *ParaFS* will not work, or that would have been an easy solution. As I can see other occasions where it would be useful to be able to use the Acorn through the IBM system I hope you can make some suggestions other than 'tough'.

"The Acorn is currently very underused because of incompatibility problems and I would like to make much more use of it. After all it cost me three times as much as the IBM and often gives far superior results, but having to add additional software every time I expand the system is a financial penalty I could do without."



As far as I know there is no PC equivalent of Stuart Tyrell's *ParaFS*, the device that connects two computers through their parallel ports. In theory it would be perfectly possible as the hardware would be compatible, but much more software effort would be needed on both sides. You see with the same computer on both sides of a link things are a lot easier.

You will probably have to go to an Ethernet card in both computers, this is very low cost at the PC end due the huge volumes in production but would probably cost a bit more at the Acorn end. Atomwide make a card for the Acorn end along with a few others. You can connect the two through a special twisted cable that allows a network to exist between two devices without any hub. If you are planning to use more than two computers or devices like network printers you would need to get a hub as well.

Once connected up you will be able to share files easily but you won't be able to use one application from the other machine. As far as I know the Apple system is the only thing that can do that. Your scanner is not too much of a problem as long as you save the results in a readable file format but the printer poses a bit more of a problem.

On the Acorn side you would have to save your documents in a compatible form for printing by the PC. The PDF system is most suitable for this as it handles both text and graphics in an as device independent way as possible.

An alternative to networking would be to allow easier file exchange between the two devices, like having a Zip drive on both computers or one that fits into the printer port and can

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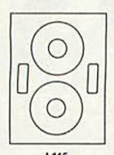
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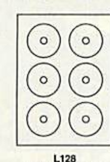
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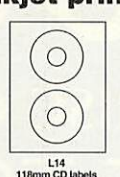
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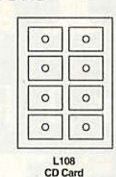
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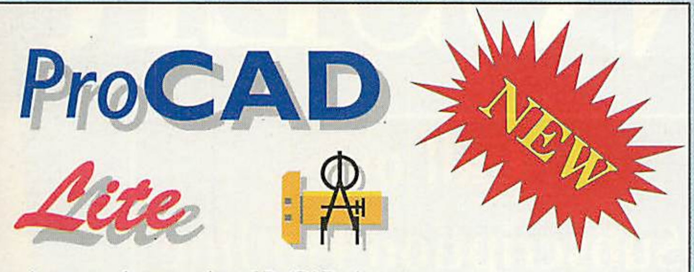
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A new cut-down version of ProCAD+ has now been released for students, schools and home users.
Full details of both ProCAD+ and ProCAD Lite are to be found on the January 2001 Acorn User CD ROM, along with demo. copies of each.
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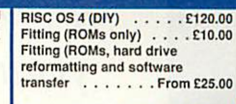
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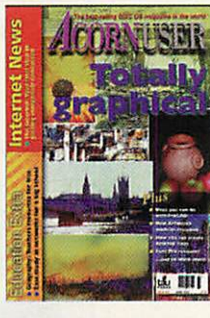
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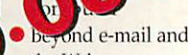
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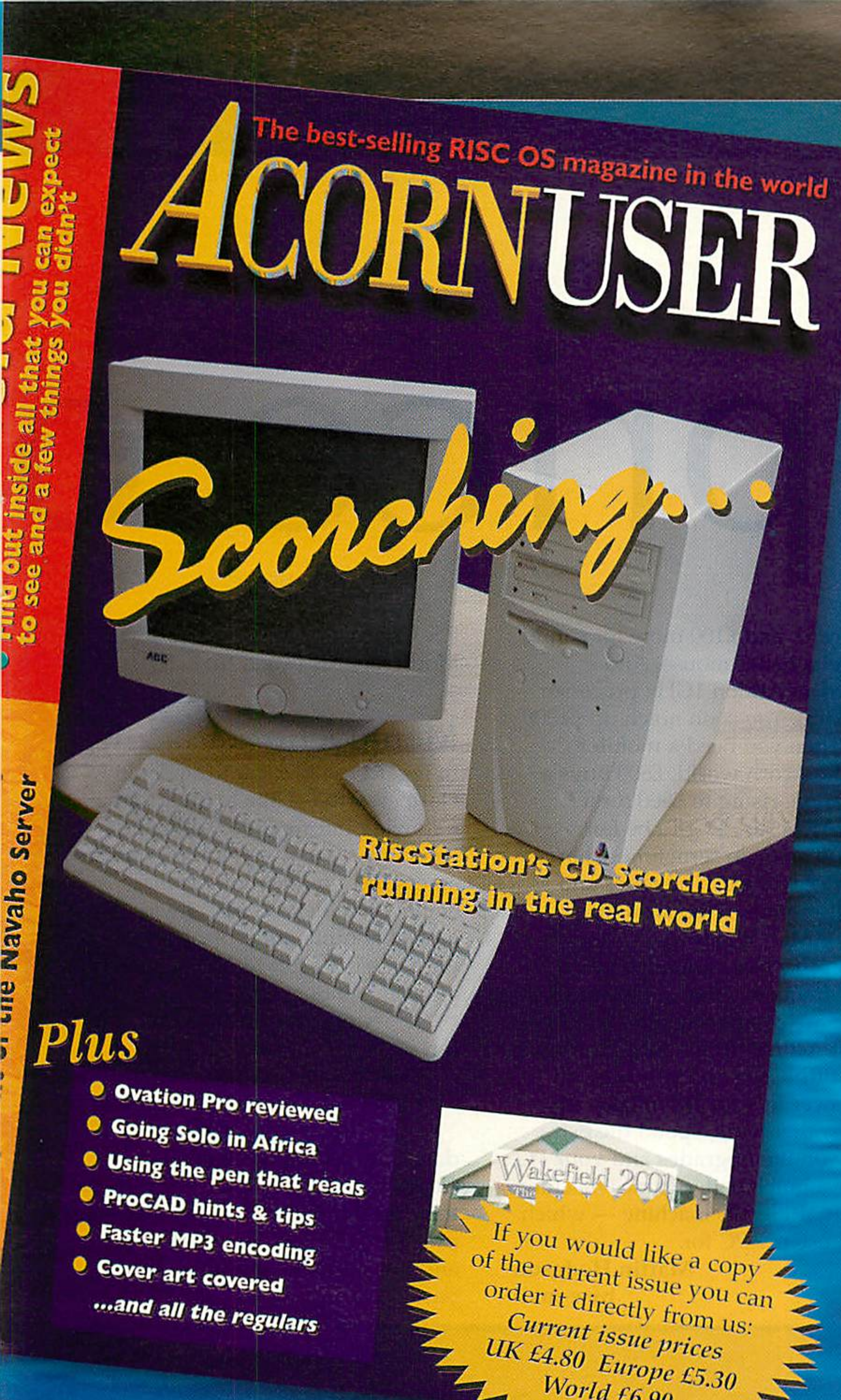
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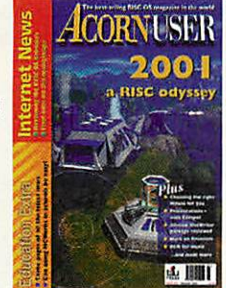


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The price o

Andy Nelson's letter (*Acorn User* April 2001) states that "it only costs a little over £300 to build a fast PC". We keep seeing these off-the-cuff remarks with nothing much to substantiate them. So, using the Simply mail order prices in this month's *Computer Shopper*, let's build a cheap, not very fast PC:

Case, ATX Midi, 235 watt	£57
Floppy drive	£14
Hard disc (10 GB is cheapest)	£80
CD drive	£33
Keyboard (Microsoft cheapo)	£28
Mouse (low cost)	£15
Motherboard (Biostar Socket A)	£88
Processor (Duron 800MHz)	£72
Sound card (basic S'Blaster 16)	£25
Video card (cheapo 8Mb AGP)	£32
Memory (very cheap ATM) 128Mb	£47
Windows ME	£151
Total	**£642**

If you want to play games add a further £100 to £200 for a reasonable video card, and £100 more for sound. And get a better mouse. And perhaps an Athlon 1GHz processor (£88 extra). You soon notch up £1000 or so. Then you need a monitor...

In the Acorn world, £600 buys a RiscStation, rising to £900 for a StrongARM Risc PC. To be fair, Acorn dealers do sometimes charge silly prices for extra memory and hard disc space. Shop around.

The AMD/Windows PC does have a processor running a much higher frequency than a StrongARM. But we are comparing old-style CISC against Acorns' RISC. Add Windows against RISC OS and you need all that power in your PC to keep up. On the other hand, spend the extra money on the upgrades and your PC will be a much better games machine than any RISC OS machine — which what I use my PC for.

Martin Hodgson
by e-mail

P.S. CJE Micros are offering Risc PC Motherboards (Mk2) for £100

Manufacturing facility

In regard to the letter from Andrew Harmsworth I'd like to offer the following information: At my last company there were 86 PCs, and as an engineer in the maintenance engineering department, I was looked at quite oddly for suggesting we needed an Acorn A5000 to carry out some of our work.

So, we got an A5000 and used it for:

- General department memos;
- Planned maintenance schedule;
- Logging energy management data from a Programmable Logic Controller — I wrote the software on the A5000 in Basic as a single-tasking program, then obtained *WimpBasic* and turned it into a multi-tasking one.

No way out

I am unfortunately receiving e-mail asking me to look at a site that seems to be full of pornographic material. The only link I have clicked on is the remove from list which does not work. I have no intention of checking out the other links but seem unable to remove this unwanted rubbish.

Can anyone suggest anything other than changing my e-mail address? I use *Oregano* with NTL World so all their advice is for Windoze and the usual patter is "oh we don't support RISC OS"

Len Baker
by e-mail

As it's not entirely clear whether you are downloading your e-mail to read offline or using Webmail I will describe the solutions in general terms rather than specifics.

To my mind it's not worth trying to get off e-mail lists, if you send e-mails, post to newsgroups or have your e-mail address anywhere on the Web in a readable form eventually you will be "found" and will start to receive junk e-mails. The "remove" option is usually just a way checking the e-mail address is valid. The type is irrelevant though some are less savoury than others.

If you keep changing your e-mail address it's the people who you do want to stay in touch with who will have the problems because they will have to keep updating their lists and when they forget that will be the end of their messages to you.

So damage limitation is the aim. If you are using Webmail the fact that you are using RISC OS is pretty much irrelevant. You need to find out what kind of mail filtering is available, if any, because that's what you need to use. The same goes for RISC OS mail readers you need to use the filtering capabilities of the software.

To reduce to a minimum the junk mail you get on your mail box you must filter out any e-mail that doesn't have your e-mail address in the "To:" field.

One of the quirks of e-mail is that the "To:" you normally see is not necessarily what's written on the e-mail "envelope", so the envelope can be addressed to you and the "To:" field says something else.

Most spam software fails to put your name in the "To:" field — presumably to speed up their output — so this simple filter will remove 95 per cent of spam (strictly it should be called "unsolicited commercial e-mail" or UCE, while spam is for newsgroups).

And that's all you need. I usually filter the spam into a separate folder to give it a once over before bulk deleting it in case something important has slipped into the wrong place it's fairly easy to spot the real messages among the dross. If you subscribe to any mailing lists these often come with "incorrect" To: fields as well. Just ensure they get filtered out first into their own folders.



f RISC

• Monitored factory machinery status;

• Then we went on to use A3010s with internal hard drives to monitor and control four machines that put special coatings on fabrics to be used to make coats;

• The creme de la creme was using another A3010 HD to provide a real-time status of personnel on site — like time and attendance. The main screen showed key personnel who were displayed in or out in alphabetical order. Keying-in was carried out using a key/swipe card system, which the A3010 interrogated every minute or when a key/card was used. It maintained a database of the times everyone entered or exited the site, including all directors.

Each department could be displayed selectably. The computer and main monitor were located in the security building and a remote monitor via a video splitter and mouse simulation buttons were located 35metres away in reception. Both security and reception could operate the department display, though name entries and disc maintenance was only carried out at the A3010 of course. It also calculated times for the wages department who used the printout from the A3010 system to verify times and attendance.

The system also provided a printout in departments, personnel on site at any time, and was particularly important for a fire roll call. The roll call printout was

Spread the word

As an ICT coordinator of a Junior School, I am in constant contact with both those in the teaching profession and those in the 'Big Wide World'. I am all too often disappointed by the brand-name companies who do not know about, or have a low opinion of, Acorn/RISC OS computers.

However, most teachers seem to be, at least, happy with their Acorns; indeed, the staff I train feel a lot more confident on RISC OS than on Windows — they will tend to try out something on RISC OS before they see if they can do it on the PC. Several of my staff have commented on how 'common sense' RISC OS is or they say about the PC, why can't it just do [such 'n' such] like on the Acorn.

On The 7Sisters' web site, you can download a survey compiled from last years findings on the number and type of computers in school. This survey shows that over 60% of schools are running RISC OS in one form or another. If this is the case, and from my experience it most definitely is, why have so many big companies not heard of RISC OS? I can think of only a few reasons.

The first is because RISC OS computers need little attention. We do not need to call out big companies to sort them out; they do not need upgrading anywhere near as often as other systems; the software is generally better, so we need less of it (*Textease* apparently covers nearly the entire National Curriculum in one title).

Secondly, many schools are holding onto their old Acorns, because they are not aware of the developing market. Some coordinators of ICT are so snowed-under that they do not have time to keep up with hardware changes.

And thirdly, we are not making noises in the right directions — at these brand-name companies I mentioned earlier. We open a catalogue and see a piece of software we like. If it is only available for Mac and PC we simply say, "Oh, what a shame." and that's that. Instead, we should phone the company and find out why the software is not available to us. They will say, "Because there is not the demand for it" but if we phone them, there clearly is.

The same applies when talking among ourselves. We should be proud of RISC OS, make our pupils proud that their Country's OS is equal to America's (yeah, I know — better) and we should tell other teachers what we are doing, why we are doing it and why they should too.

You cannot get away from the fact that, in an office, Windows is great. (You have read this far, so I feel comfortable that you are still with me after that.) You do not need to understand computers to use one; you can write a letter and send e-mail as well as use a spreadsheet, without having to have a degree in computer science. But I think we will all agree, even if we are teaching in a totally PC school, if we have experience of RISC OS, we know it to be a better system to learn on.

After all, we are not just writing letters and sending e-mail, we are programming, controlling, modelling as well as communicating and data handling. This must require a certain amount of knowledge and understanding and so we must allow our children to use the system that promotes the understanding instead of denying it.

So, come on! Let's shout it at people — teachers, lecturers and big companies alike: RISCOS is The Productive Operating System and we want to use it! We will not sit back and accept that some software is not available to us. We demand to choose our software and retain the right to use our chosen Operating System.

The 7Sisters is an organisation dedicated to platform independence in schools. If you feel the same way, pop along to the site and sign the guestbook — give us something to fight with!

Graham Wootten
www.the7sisters.co.uk

automatically called for by simulating all mouse buttons being pressed. Dead simple.

The whole system cost £2,500 plus my time writing the software: the commercial equivalent which had a horrible display was about £20,000.

• A second A5000 was used to control a solvent-burning incinerator. While further A3010s were installed on seven solvent-coating machines. These were linked to an A5000 which monitored solvent levels via various sensors and controlled the air/gas/solvent mixture in the incinerator. The incinerator saved £174,000 by using the heat from the incinerator to warm the drying ovens.

Any suggestion that these machines cannot be used in a practical environment can be scotched right now.

Phil Coates
by e-mail

Warp and weft

I read with interest the various articles in this month's *Acorn User* and have woven them together to show some possible paths for our community.

The editorial was both interesting but rather disturbing. It is good to see a new machine being developed — but very worrying to hear that Omega's problems arise not out of technical difficulties with the necessary chip but because they are being bumped to the back of the queue because their order is (and, pardon me for being blunt) insignificant within the "big picture".

Market share has always been critical to any product and it was worrying to see Microsoft take a share recently in Apple in order to get around monopolist charges (Hold on! The anti-trust case may still stick.) RISC OS obviously does not have sufficient market share to make a small order stick with a mass manufacturer. This puts its future in permanent doubt.

Software: There is a current dilemma about the software base which, if not actually shrinking, certainly does not appear to be growing. While stories like Stonar School are heartening, they are the exception rather than the rule. If the software base fails to extend (and Sherston quitting our market was a major body blow) the case for the dreaded Windoze becomes even stronger.

Visiting BETT, I was told by a Castle rep that he had a constant stream of tearful ex-RISC OS teachers who had been forced by governors to move to Windows — because it's "industry standard". The arguments about overall costs of investment, having to employ a full time technician and so on, simply cut no ice. Most of these teachers agreed that popular support may well swing back behind RISC OS once the true cost of operating Windows had been found out — but by then it might be too late.

To this end Andy Nelson's e-mail in the same issue raised an interesting point and it is, perhaps, time that people were given the chance to assemble their own RISC OS kits — it would erode margins, surely, but if there is a market then go for it.

The e-mail from the other, unnamed, person is much more worrying and is, perhaps, a sign that our market is not developing with enough new blood and talent. Are there, maybe, too many old stagers, like myself, hanging around the place encouraging the young programmers of today to write like we did and, similarly, writing manuals of such an abstruse nature that they never get used?

(Old computer joke: What's the manual in a computer software package for? To prop the b****y door open so that your Mum can come in with another cup of strong tea while you work out what's gone wrong with the program you are using. For younger readers I should point out that manuals of that era were generally a mixture of unreadable jargon and/or Japanese English.)

Perhaps, though, Microsoft (and the companies that make computers that use their software) are also good at hiding their failures. How come RM's failure in Northern Ireland — including a reported write-off of £5,000,000 — never got reported? Good luck, good judgement, or jolly good PR? You work it out.

However, when all is said and done, and for all the opprobrium piled on Microsoft, the fact remains that they control 92 per cent of the market and that is a stranglehold. We will have to go along with them one way or another. Future events in the US Senate will have to be awaited with bated breath.

In the meantime a toehold needs to be secured. To that end we should all be lobbying David Blunkett, Secretary of State for Education, to ensure that Microsoft does not wipe out the one remaining native UK hardware/OS developer. Mr.Blunkett is already trying his best to make sure this happens and RISC OS is wiped out. (See **www.hobsons.ect.com**)

Christopher Price
ICT Coordinator,
Merton Court School, Sidcup, Kent

Good offices

I recently got online using both the *Oregano* and *R-Comp* Internet software. Nothing is ever that simple in life, and I had various problems getting the applications to work correctly. The problems weren't with the applications but with my set-up.

Anyway I received sterling service from both Castle and R-Comp. Nothing was too much trouble and everything now works fine. My thanks to all involved.

David Braine
by e-mail

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